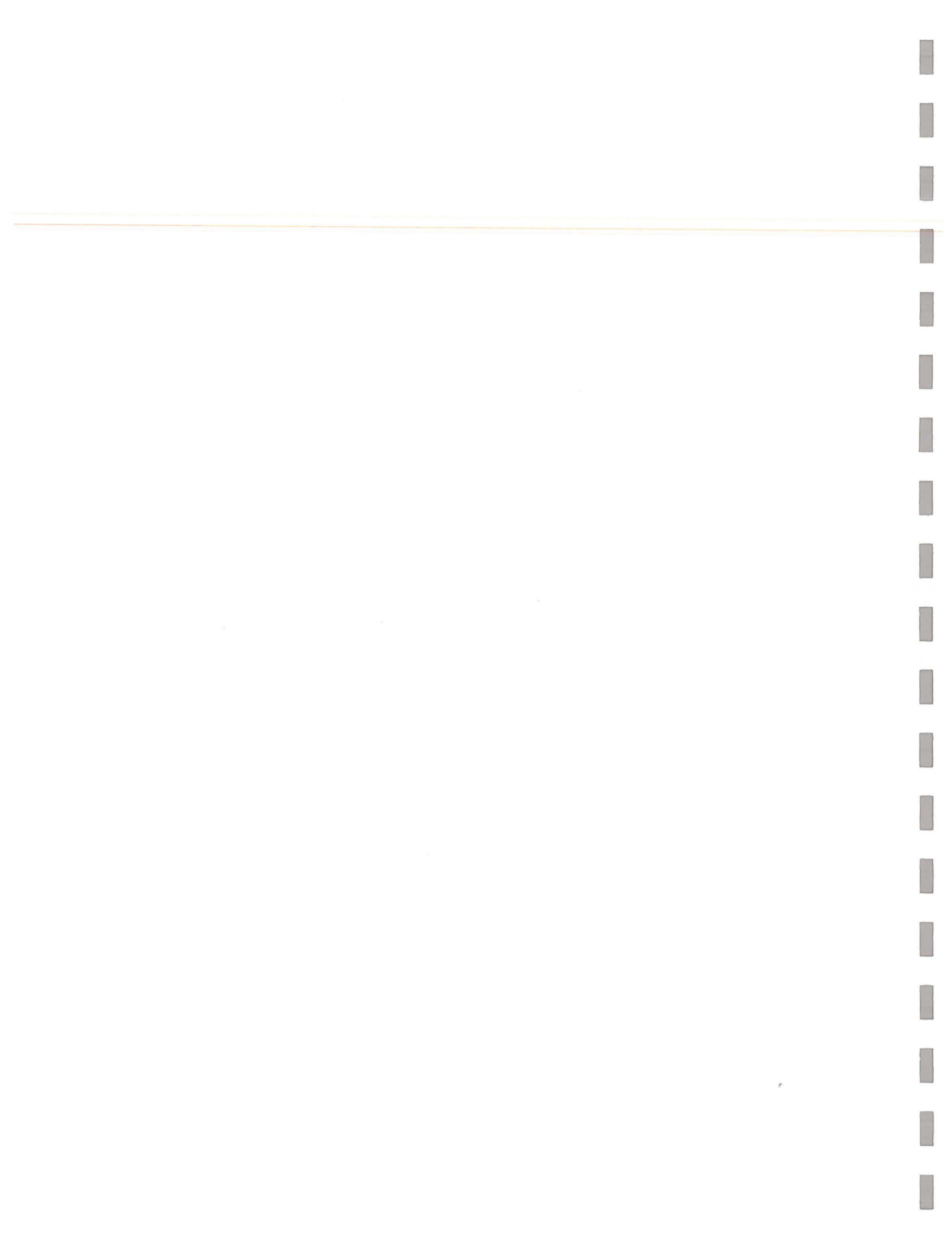


TAR FLAT, RINCON HILL AND THE SHORE OF MISSION BAY:

**Archaeological Research Design and Treatment
Plan For SF-480 Terminal Separation Rebuild**



**Prepared for The California Department of Transportation
Volume II**



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TAR FLAT, RINCON HILL, AND THE SHORE OF MISSION BAY: ARCHAEOLOGICAL RESEARCH DESIGN AND TREATMENT PLAN FOR SF-480 TERMINAL SEPARATION REBUILD

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VOLUME Two

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4.0 RESEARCH DESIGN

4.1 INTRODUCTION

The preceding volume has shown some of the ways in which humans have used the SF-480 project area in both the distant and the more recent past. Such intensive use over an extended period of time inevitably creates a material record in the form of archaeological deposits. This chapter begins by presenting what is known of the archaeology of the general area. Next, the mandated framework for archaeological research in the context of the Section 106 process is described. Finally, the chapter offers research designs for several archaeological property types that the preceding historical, archival, and archaeological research has indicated may be present within the project area.

4.2 PREVIOUS ARCHAEOLOGICAL RESEARCH by Donna M. Garaventa with Deborah M. DiPasqua, Steven J. Rossa, and Melody E. Tannam; Basin Research Associates Inc., San Leandro

A prehistoric and historic site record and literature search was conducted by Ms. Anmarie Medin at the Northwest Information Center, California Archaeological Inventory, Rohnert Park (NWIC File No. 92-108).

In addition to the data on file with the NWIC, sources of information on previous archaeological work include numerous archival, testing, data recovery, and monitoring reports on file with the City and County of San Francisco, Office of Environmental Review, Department of City Planning, City and County of San Francisco (Randall Dean, personal communication 3/27/92, 4/2/92); San Francisco Redevelopment Agency, (Thomas Conrad, personal communication 4/2/92); and the Office of the Chief Administrative Officer, City and County of San Francisco (Ray Fong and Jack Moerschbaeher, personal communication 4/2/92). See Table 4.1 for a summary of cultural resources reports in or adjacent to the project area and Table 4.2 for a summary of sites in and within 1 mile of the project.

4.2.1 Historic-Period Sites

There are only 124 recorded archaeological sites in the City and County of San Francisco--that is, sites with assigned State of California trinomials (CA-SFr-*number*). Historically significant buildings, along with parcels and projects with the potential for remnants of ships and ship-breaking yards, Gold Rush era or Overseas Chinese remains, have merited considerable attention. For the most part, the data generated as a result of historical research and archaeological field work have been descriptive, with only minimal attempts at comparative analyses or interpretations (see also M. Brown 1980:35; Pastron 1990b:11-18).

There are 31 recorded historic-era sites within 1 mile of the project area, including 18 historically significant buildings/districts; five ships; and eight historic dumps with a variety of building and artifactual remains, the majority of which date to the Gold Rush era (Tables 4.1, 4.2). Of these 31 cultural resources, one recorded site, CA-SFr-116H, plus one successful test location, Swain's Stable, are situated adjacent to the proposed project, while 22 are situated within 1/2 mile. It should be noted that, in some cases, no trinomials have been solicited or assigned to a number of archaeological collections resulting from preliminary testing, data recovery, and archaeological monitoring programs. For example, the *Apollo* storeship remains at the northwestern corner of Battery and Sacramento streets (Pastron 1990b:15; Archeo-Tec 1991a) is not a "formally" recorded site.

A number of cultural resources reports include areas within or adjacent to the proposed project, but to date systematic archaeological research of the historic era within San Francisco has been limited. For the most part, since the late 1970s, sites have been recorded as the result of archaeological work mandated by the California Environmental Quality Act (CEQA) or through Federal compliance with the National Historic Preservation Act of 1966. Some of the certified EIRs and other cultural resources reports include blocks within or adjacent to the project area (e.g., #73.62, 81.27 Yerba Buena Center; #74.224 Bechtel High Rise Office Building; #78.207 Federal Reserve Bank; #79.236 01 Mission Supplement; #80.267 Rincon Point/South Beach; San Francisco [City and County], Office of Environmental Review, Department of City Planning ca. 1991 [numeric designations refer to Assessor Block/Lot number]). The project-specific studies generally concentrate on individual building construction but do include larger, more comprehensive, efforts (Pastron 1990b:13-17). The research conducted for the Pacific Gas and Electric Company for the Potrero Power Plant Unit No. 7 was probably the first comprehensive attempt to link documentary research to potential cultural resources and systematic archaeological testing (Wirth 1979a-b, after M. Brown 1980:35).

A number of projects conducted by the San Francisco Redevelopment Agency have involved extensive historical and archaeological work. These include projects known as the "Rincon Point - South Beach" (e.g., Table 4.2: Sites CA-SFr-115H, -116H, -119H, -120H; Pastron 1985b-c, 1990c; Ramsey and Geddes 1985) and the "Yerba Buena Center," which includes the Moscone Convention Center (CA-SFr-114; Archeo-Tec n.d.a, 1988c, 1990b; R. Olmsted, N. Olmsted, Pridemore, Pastron, Prichett, Kortum, R.W. Olmsted, and Livingston 1977, 1979; R. Olmsted, N. Olmsted, and Pastron 1979c). But by far, the San Francisco Clean Water Program has involved the most time and effort (e.g., Heid n.d.; Ayres and Stone 1976; Albee and Willer 1976; Breschini and Haversat 1977; Garaventa and Pastron 1983; R. Olmsted and N. Olmsted 1978, 1979, 1980a; R. Olmsted, N. Olmsted, Fredrickson and Bente' 1982; R. Olmsted, N. Olmsted, and Pastron 1977a-e, 1978a-c, 1979 a-b; Pastron, Prichett, and Ziebarth 1981; R. Olmsted, N. Olmsted, Prichett, and Pastron 1981; Chavez and Ramsey 1979; Shoup and Baker 1981).

As noted by Pastron (1990b:11, 17), research on Gold Rush sites such as CA-SFr-27H, -47H, -117H (including Chinese material), -118H (the Hoff Store site), -119H, and -122H has focused on the ". . . transformation from boomtown to urban center. Sub-themes include examination of the chronology of urban development throughout the Gold Rush, social conditions (e.g., class, sex [gender], ethnicity), trade and economy, and sociocultural change)" (Pastron 1990b:11). In the case of the Overseas Chinese, "ethnicity, acculturation, and assimilation" are major topical concerns (Pastron 1990b:14).

Earlier topical studies include Spanish and Mexican adobes and other buildings in the vicinity of Yerba Buena Cove as well as Mission Dolores and the Presidio (Hendry and Bowman 1940a-d). In addition, "traditional" sensitivity maps and other theme studies have been generated as part of the National Park Service stewardship of the Golden Gate National Recreation Area (GGNRA). These include studies of both prehistoric and historic archaeological resources by Kelly (1976, 1980, 1981) as well as topical studies by Armentrout-Ma (1979) for Chinese; Lang (1979) for Native American and Hispanic; Langellier and Rosen (1991a-b) for Hispanic; Daniels (1980) for African Americans; and Delgado and Haller (1989a-b) for submerged cultural resources.

Buried and submerged ships as well as ship-breaking yards have merited considerable attention (California State Lands Commission v.d.; San Francisco Maritime Museum 1963; Delgado 1979a-b, 1980, 1981a-b; Pastron and Pritchett 1980; R. Olmsted 1988; Delgado and Haller 1989a-b). Formally recorded ship resources within 1 mile of the proposed project include an unknown/unnamed ship (CA-SFr-33H), as well as the *Niantic* (SFr-81H), *Lydia* (SFr-94H), and the *William Grey* (SFr-104H). George Hare's ship-breaking yard (SFr-115H) involved ship

remnants and employed Chinese workers who resided within the Rincon Point Chinese Fishing Village (SFr-116H; see Table 4.1 for various select references). As reviewed in Pastron (1990b:17), substantial Chinese sites/finds within San Francisco include four within 1 mile of the proposed project area.

1. CA-SFr-116H, the Rincon Point Chinese Fishing Village, which is ". . . probably California's first Chinese fishing village" ca. 1850-1852 or mid-1860s located on the southern shoreline of Rincon Point [adjacent to Block 8];

2. CA-SFr-120H, an 1880s Chinese laundry/residence and a cluster of Scandinavian sailors' boarding houses and saloons along the waterfront near the intersection of Howard and Steuart streets;

3. CA-SFr-123H, a Gold Rush Chinese store "destroyed, perhaps with explosives to serve as a fire break, during the fire of May 3-4, 1851," located on northeast corner of the block bounded by California, Kearny, Sacramento, and Grant streets; and

4. The Fat Yuen Laundry site, dating to the 1870s, located along the north side of Third Street between Howard and Folsom within the Moscone Convention Center site (Garaventa 1979; Pastron 1990b:17).

The N-5 Pump Station located more than 1 mile from the project area in the vicinity of North Point and Kearny streets (Pastron 1990b:17), produced "the largest sample of Chinese ceramics found in an archaeological context in San Francisco. Some of the intermixed Euroamerican style ceramics were manufactured after 1900; the Chinese component has been attributed to the period primarily between 1880-1885" (Pastron et al. 1981:686-687, 692, 695; Garaventa and Pastron 1983).

In spite of the relatively limited attention paid to historical archaeology until the 1980s, spectacular finds such as CA-SFr-118H, Hoff's Gold Rush General Store site (Pastron and Hattori 1990), and greater ethnic awareness have substantially increased the importance of historical archaeology to practitioners and the public alike.

4.2.2 Prehistoric Period Sites by Susan H. Alvarez

There is a single prehistoric archaeological site recorded within or adjacent to the project area, CA-SFr-2 (Nelson #439), where bird and mammal bones, numerous "cooking stones," and charcoal and ash were reportedly recovered in 1909 at a shell deposit on Third Street and Harrison (between Blocks 9 and 10) (Anonymous n.d.). First noted by Nelson (1909), CA-SFr-2 site materials were recovered at a depth of 6 feet below the present (1993) surface. Human skeletal remains, a chert biface fragment, and a bevel-edged, flat-bottom mortar were reported

from CA-SFr-2 (Rudo 1982:20). Below the accumulated fill, CA-SFr-2 is situated approximately on the former 20-foot contour line, about one-half block north/northwest of a former large marsh (see Map 2.1).

Three prehistoric sites are recorded within 1 mile of the project area. In 1986 test excavation at three sites (CA-SFr-112, -113, and -114) several blocks west of the project area resulted in recovery of flaked lithic material, including obsidian, as well as quartz crystals, mica, ochre, groundstone, and bone tools; a variety of dietary constituents was dominated by shellfish remains (Pastron and Walsh 1988a-c). The three sites were found at depths between approximately 3 and 5 meters below present ground surface (Walsh 1986a-c).

The CA-SFr-112 deposit was recorded approximately 5.1 meters below present ground surface, on Mission between First and Second streets, about one block west of and downslope from Block 5 (Walsh 1986a). According to 1850s topographic information, CA-SFr-112 is situated on the toe of the first rise above the former Yerba Buena Cove shoreline. Data recovery at CA-SFr-112 produced obsidian materials including 9 bifaces and over 100 pieces of debitage. Of these materials, 45 were subjected to sourcing and hydration rim analysis; the obsidian, which derived from north bay sources in Napa and Sonoma counties and from an eastern Sierra source in Mono County, yielded a hydration range of 1.6 to 3.6 microns (Pastron and Walsh 1988b).

CA-SFr-113 is four blocks west of the project area, at depths of from 3.2 to 4.8 meters below present ground surface (Walsh 1986b). CA-SFr-113 was situated on the southeast-facing slope of a former ridge, at the head of and overlooking the adjacent stream valley (Schlocker 1974:89). Flaked lithics, groundstone, bone tools, and dietary debris were recovered from the site (Pastron and Walsh 1988c).

CA-SFr-114, two blocks west of the project area, was encountered at depths of from 3 to 4.5 meters below present ground surface (Walsh 1986c). CA-SFr-114 was situated inland from the shoreline, on a west-facing terrace, adjacent to the stream flowing northeast into former Yerba Buena Cove (Map 2.1). Obsidian biface fragments, bone awls, heat-affected rock, and dietary debris were recovered from the site (Pastron and Walsh 1988b).

CA-SFr-2, -112, -113, and probably -114 are all located on deeply buried dunes within about 900 meters of each other along the former shoreline of Yerba Buena Cove.

TABLE 4.1: Cultural Resource Reports in or Adjacent to the Route 480 Terminal Separation Project

501 BRYANT STREET

South of Project Block 10, Assessor's Block 3776/Lot 115*

Pastron, Allen G.

1983b A Cultural Resources Evaluation of 501 Bryant Street, San Francisco. [Letter Report]. Ms on file, S-9337, California Archaeological Inventory, Rohnert Park.

77 DOW PLACE

West of Project Block 6, Assessor's Block 3750, Lot 2

Morgan, Sally

1990 Letter Report to Mr. Grey LeBon, Taisei Construction Corporation. Regarding findings of cultural resources evaluations of 77 Dow Place Site, San Francisco, California (including Shoup 1990, records search, and field survey), San Francisco, California. Dated October 5, 1990. Ms on file, S-12187, California Archaeological Inventory, Rohnert Park.

869 FOLSOM STREET

North of Project Block 10, Assessor's Block 3751

Pastron, Allen G.

1990f 869 Folsom Street, San Francisco, California: Archival Cultural Resources Evaluation. For Robert J. Fehrer, San Francisco. September. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.

413 FOLSOM STREET

South of Project Block 4

Wirth Associates, Inc.

1979b Potrero 7: Phase II: Archaeological Test Excavations. For Pacific Gas and Electric Company. Report on file, California Archaeological Inventory, Rohnert Park.

600 HARRISON STREET

North of Block 9/west of Block 6, Assessor's Block 3750

Pastron, Allen G.

1983a A Cultural Resources Evaluation of the Property at 600 Harrison Street in San Francisco. [Letter Report]. Ms on file, S-9317, California Archaeological Site Inventory, Rohnert Park.

TABLE 4.1, continued

Cultural Resource Reports in or Adjacent to
the Route 480 Terminal Separation Project

HOWARD STREET

North of Project Block 3, Assessor's Block 3719/Lots 5-9, 89, 50?

Pastron, Allen G.

1990g

Archival Cultural Resources Evaluation of the Proposed Howard Street Development Project, San Francisco, California. February. For ESA, San Francisco. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.

524 HOWARD STREET

North of Block 5, Assessor's Block 3712/Lot 13

Pastron, Allen G.

n.d.a

Cultural Resources Evaluation of Five South of Market Parcels, San Francisco, California [100 First, 535 Mission, 524 Howard, 201 Second and 1 Second Streets]. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and S-9338, California Archaeological Inventory, Rohnert Park.

Pastron, Allen G.

1990e

524 Howard Street, San Francisco, California: Pre-Construction Archaeological Testing Program. July. For Anvil International Properties, San Francisco. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.

Pastron, Allen G.

1991a

Letter to Barbara Sahm, Environmental Review Officer, Office of Environmental Review, Department of City Planning, City and County of San Francisco. Regarding artifacts of historical significance recovered at 524 Howard Street and direction to cease laboratory processing by Mr. Alexander L. Lui. Dated January 14, 1991. Archeo-Tec, Oakland. On file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.

135 MAIN STREET

East of Project Block 1, Assessor's Block 3717

Archeo-Tec

1987d

Cultural Resources Evaluation of 135 Main Street, San Francisco, California. For the Webb Companies, Sausalito. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.

TABLE 4.1, continued

Cultural Resource Reports in or Adjacent to
the Route 480 Terminal Separation Project

RINCON POINT/SOUTH BEACH

Includes CA-SFr-116H on block south of Project Block 8; Assessor's Blocks 3515, 3716 [Block 1], 3741-43, 3773 [south of Block 8], 3774 [south of Block 9], 3790, 3792-93, 3789, 3791, 3801, 3702, Piers 40, 42, 44, and 46A

Pastron, Allen G.

1985b Rincon Point - South Beach Report on Historical Cultural Resources. For San Francisco Redevelopment Agency. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.

1985c Rincon Point - South Beach Cultural Resources Summary Information Handbook. For San Francisco Redevelopment Agency. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and S-9340, California Archaeological Inventory, Rohnert Park.

Ramsey, Eleanor M. and Virginia Geddes

1985 Rincon Point - South Beach Project: Oral History Report. For San Francisco Redevelopment. Report on file, S-3243, California Archaeological Inventory, Rohnert Park.

Pastron, Allen G.

1990c Rincon Point - South Beach Redevelopment Project Parcel E: The Bayside Village Site, Archaeological Testing and Data Recovery Program [CA-SFr-116H]. January. Report on file, San Francisco Redevelopment Agency.

SAN FRANCISCO DOWNTOWN TERMINAL RELOCATION PROJECT

Along Second Street/Project Blocks 5-7, 9 and along Main and Howard Streets/Project Blocks 1, 2, and 5

Holman and Associates

1990 Report on Potential Cultural Resources for the San Francisco Downtown Terminal Relocation Project. For CHMM, Environmental Waste Management, Gibbs & Hill, Inc., San Francisco. January 31, 1990. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.

Shoup, Laurence H.

1990 Historical Overview of the 77 Dow Place Site, San Francisco, California. Report on file, S-12188, California Archaeological Inventory, Rohnert Park.

YERBA BUENA CENTER

All or parts of 3075-3705, 3722 [oblique to northwest of Block 5]-2724, 3733-3735 [west of Block 5], 3750-3752 [east of Block 6/north of Block 9, 3751 north of Block 10; 3752 oblique to northwest of Block 10], 3763 [Block 9]

TABLE 4.1, continued
Cultural Resource Reports in or Adjacent to
the Route 480 Terminal Separation Project

Archeo-Tec n.d.a	Historical Archaeology at the Yerba Buena Center, San Francisco, California. Ms on file, Archeo-Tec Inc., Oakland.
Olmsted, R., N. Olmsted, A.R. Pridmore, A.G. Pastron, J. Prichett, John Kortum, R.W. Olmsted, and Eve Livingston 1977	Yerba Buena Center: Report on Historical Cultural Resources. November 4, 1977. For Environmental Science Associates, San Francisco. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and S-5673, California Archaeological Inventory, Rohnert Park.
Pastron, Allen G. 1978	Yerba Buena Convention Center: Pre-Construction Archaeological Testing Program. To George R. Moscone Convention Center Project Office, San Francisco. [As cited in Archeo-Tec 1990: <i>Moscone Center Expansion Project: Archaeological Data Recovery Program.</i>]
Olmsted, R., N. Olmsted, A.R. Pridmore, A.G. Pastron, J. Prichett, John Kortum, R.W. Olmsted, and Eve Livingston 1979	Yerba Buena Convention Center: Report on Historical Cultural Resources. Report on file, San Francisco Redevelopment Agency, San Francisco. August. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and Basin Research Associates, San Leandro.
Olmsted, R., N. Olmsted, and A. Pastron 1979c	Yerba Buena Center: The Edge of Rincon Hill. Archival Report on the Historical Cultural Resources of Eastern Block 3. For the San Francisco Redevelopment Agency.
Garaventa, Donna M. 1979	[Draft Manuscript. Fat Yuen -- A Chinese Laundry, 707 Howard Street, San Francisco. Central Block 3, Yerba Buena Center Testing Program.] Ms on file, Archeo-Tec, Oakland, and in the possession of the author.
Archeo-Tec 1988c	Moscone Convention Center Expansion Project: Pre-construction Archaeological Testing Program [CA-SFr-114]. Ms on file, Office of the Chief Administrative Officer, San Francisco and Office of Environmental Review, City and County of San Francisco Planning Department, San Francisco.

TABLE 4.1, continued
Cultural Resource Reports in or Adjacent to
the Route 480 Terminal Separation Project

1990b	Moscone Convention Center Expansion Project: Archaeological Data Recovery Program [CA-SFr-114]. December. For Mr. John Cribbs, Project Manager. Ms on file, Office of the Chief Administrative Officer, San Francisco.
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201 SECOND STREET

Northwest corner of Block 5, Assessor's Block 3726/Lot 97

Pastron, Allen G.

n.d.a	Cultural Resources Evaluation of Five South of Market Parcels, San Francisco, California [100 First, 535 Mission, 524 Howard, 201 Second and 1 Second Streets]. Report on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and S-9338, California Archaeological Inventory, Rohnert Park.
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222 SECOND STREET

West of Block 5, Assessor's Block 3725

Archeo-Tec

1986d	Cultural Resources Evaluation of 222 Second Street, San Francisco, California. Report on file, S-9325, California Archaeological Site Inventory, Rohnert Park.
1990a	222 Second Street, San Francisco, California: Pre-Construction Archaeological Testing Program. December. For Sepulveda Properties, San Francisco. Ms on file, Office of Environmental Review, Department of City Planning, San Francisco.
1991b	222 Second Street, San Francisco, California: Pre-Construction Archaeological Testing Program. August. For Sepulveda Properties, San Francisco. Ms on file, Office of Environmental Review, Department of City Planning, San Francisco.

299 SECOND STREET

West side of Block 5, Assessor's Block 3736

Archeo-Tec

1986c	Cultural Resources Evaluation of the 299 Second Street Office Building, San Francisco, California. Report on file, S-9324, California Archaeological Site Inventory, Rohnert Park.
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* Reports and files at the Office of Environmental Review, Department of City Planning, City and County of San Francisco, are organized by Assessor's Block/Lot numbers. An 1985 Map of the City and County of San Francisco, Department of Public Works, Bureau of Engineering was also consulted.

TABLE 4.2

Recorded Sites in and within One Mile of The Route 480 Terminal Separation Project

SITE TYPE/NUMBER		DESCRIPTION/LOCATION/SELECTED REFERENCES*
PREHISTORIC SITES	HISTORIC-ERA SITES	
Building/ District	Ship/ Ship Parts	Dump/etc.
CA-SFr-2 (Nelson #439)		Shellmound at Third & Harrison Sts. (Anonymous n.d.; Nelson n.d., ca. 1910; Archeo-Tec 1991a) [the only prehistoric site immediately adjacent to the project area]
CA-SFr-19 (Nelson #431)		Shellmound vaguely located South of Market St. (Nelson n.d., ca. 1910; Nichols 1979)
CA-SFr-28		Civic Center BART Station site, Market St. btwn Seventh and Eighth Sts. (Henn and Shenk 1970; Henn et al. 1972; Kerr 1978a)
235 CA-SFr-112		Stevenson Street Shellmound on the block bounded by Market, Mission, First, and Second Sts. (Archeo-Tec 1985b; Walsh 1986a; Pastron and Walsh 1988a)
CA-SFr-113		Market Street Shell Midden at southeast corner of Market and Fifth Sts. (Pastron 1985a; Walsh 1986b; Pastron and Walsh 1988b)
CA-SFr-114		"Moscone" or Yerba Buena Shellmound on Howard btwn Third and Fourth (Walsh 1986c; Archeo-Tec 1988c, 1990b; Pastron 1990b)
	CA-SFr-27H	Gold Rush era dump site at NW corner of Market and Fremont Sts (Kerr 1977; Reed 1978)
	CA-SFr-33H	Historic Ship relics (a yard-arm) located 180 feet E of Montgomery, 60 feet N of Clay, 20 feet below street level on block bounded by Clay, Washington, Montgomery, and Sansome Sts., "just west of the 'Niantic'" (Malloch 1970; Kerr 1978b)

TABLE 4.2, continued

Recorded Sites in and within One Mile of The Route 480 Terminal Separation Project

SITE TYPE/NUMBER		DESCRIPTION/LOCATION/SELECTED REFERENCES*
PREHISTORIC SITES	HISTORIC ERA SITES	
Building/ District	Ship/ Ship Parts Dump/etc.	
CA-SFr-40H		Mills Building and Tower at 220 Montgomery and 220 Bush Sts. (Michael n.d., 1974; Corbett 1979:205)
CA-SFr-42H		United States [Main] Post Office and District Court of Appeals Building at 99 Seventh btwn Stevenson and Mission Sts. (Mead 1970a-b)
CA-SFr-43H		Bank of Italy 525 Montgomery St (Christian 1977; Cooper 1979b)
CA-SFr-44H		Pacific Gas and Electric Company Substation "C" at 222-226 Jessie btwn Third and Fourth Sts. (Corbett 1974, 1979:76; Cooper 1979b)
CA-SFr-46H		"Lotta's Fountain" (Lotta Crabtree) at the intersection of Kearny and Geary at Market St. (Averbuch 1974; Cooper 1979c; Corbett 1979:239)
CA-SFr-47H	CA-SFr-47H	Former International Hotel at 848 Kearny St. at the SE corner of Kearny and Jackson Sts.; with "strata of Gold Rush era artifacts" prior to ca. 1854 (Mellon 1977; Cooper 1979d; Archeo-Tec 1987e; Pastron 1987c)
CA-SFr-49H		Hallidie Building at 130 Sutter St. on block btwn Sutter, Bush, Kearny, and Montgomery (Mead 1970c; Cooper 1979e)
CA-SFr-51H		Fitzhugh Building at 384 Post St. on NE corner of Union Square, Powell at Post Sts. (Powers and Delehanty 1975; Cooper 1979f)
CA-SFr-52H		Jackson Square Historic District or "Barbary Coast" bounded by Sansome St., Washington St., Columbus Avenue and irregular line about midway btwn Pacific Avenue and Broadway. The only surviving early commercial area, built on fill including abandoned ships (Mead 1971; Cooper 1979g)

TABLE 4.2, continued

Recorded Sites in and within One Mile of The Route 480 Terminal Separation Project

SITE TYPE/NUMBER		DESCRIPTION/LOCATION/SELECTED REFERENCES*
PREHISTORIC SITES	HISTORIC ERA SITES	
Building/ District	Ship/ Ship Parts	Dump/etc.
CA-SFr-54H		United States Custom House Building located at 555 Battery Sts. on block bounded by Battery, Sansome, Jackson, and Washington Sts. (Cardwell n.d.; Cooper 1979h)
CA-SFr-55H		Union Ferry Depot Building or "Ferry Building," on the Embarcadero at the foot of Market St. (McGuire 1977; Cooper 1979i; Corbett 1979:73)
CA-SFr-61H		Ferry Station Post Office Building located on the Embarcadero at the foot of Mission St. (McGuire 1978; Cooper 1979j)
CA-SFr-62H		Former City of Paris Building (originally Spring Valley Water Works Building) at 181-199 Geary St. on SE corner of Stockton and Geary Sts., now occupied by Nieman Marcus (Elisassen 1974; Cooper 1979k)
	CA-SFr-81H	<i>Niantic</i> Storeship, Niantic Hotel 1851-1872, and Niantic Block 1872-1906 w/ part still in situ NW corner of Clay and Sansome Sts. (Bertrand Laboratory 1978; Bullen 1978; Delgado and Chappell 1978a-b; Delgado 1979a-b, 1980; Baker 1980; Smith 1981a-b)
CA-SFr-83H		San Francisco Civic Center bounded by Golden Gate Avenue, Franklin, Hayes, and Market Sts. (Corbett 1976; Cooper 1979l)
CA-SFr-85H		Geary Theatre located at 415 Geary St. btwn Mason and Taylor Sts. (Opsata 1974; Cooper 1979m)
CA-SFr-88H		Audiffred Building located at 100 The Embarcadero (Corbett 1979:222 as 1-21 Mission St.; Tencer 1979; Cooper 1979n)

TABLE 4.2, coninued

Recorded Sites in and within One Mile of The Route 480 Terminal Separation Project

PREHISTORIC SITES	SITE TYPE/NUMBER		DESCRIPTION/LOCATION/SELECTED REFERENCES*
	Building/ District	HISTORIC ERA SITES Ship/ Ship Parts Dump/etc.	
	CA-SFr-90H		Three buildings "17-55 Ohio Street" (currently "17-55 Osgood Street") btwn Broadway, Pacific, Sansome, and Montgomery Sts. (Dunlap 1978; Cooper 1979o)
		CA-SFr-94H	"Old Whaling Bark" <i>Lydia</i> on Seawall Lot #3801 btwn King St. and The Embarcadero (Olmsted and Olmsted 1980a; Prichett 1980; Pastron et al. 1981)
	CA-SFr-96H		Rincon Annex U.S. Post Office Building 101-199 Mission St. N end of block btwn Mission, Howard, Steuart, and Spear Sts. (Platt 1978; McGregor 1980)
		CA-SFr-104H	Levi's Plaza ship, the 'William Grey,' former address 1201 Battery near Battery and Filbert Sts. (Pastron and Prichett 1979; Olmsted et al. 1978d; Olmsted and Olmsted 1980b; Smith 1981)
		CA-SFr-115H	Charles Hare ship-breaking yard on block bounded by Steuart, Spear, Folsom, and Harrison Sts. (Pastron 1984a; 1990b:15; Archeo-Tec 1987b-c; Pastron and Delgado 1991)
		CA-SFr-116H	Rincon Point Chinese Fishing Village adjacent to study area at the S foot of Rincon Hill btwn Brannan, Bryant, Beale, and First Sts. (Ramsey and Geddes 1985; Pastron 1985b-c, 1987b, 1989, 1990b:17, 1990c)
		CA-SFr-117H	Hudson's Bay Company building with unmortared brick floor and associated wells, privies, and trash pit including EuroAmerican and Chinese material dating to Gold Rush era ca. mid- or late 1850s located btwn Commercial and Sacramento Sts. at SW corner of Montgomery and Commercial St. (Archeo-Tec n.d.b; Pastron n.d.b, 1985d: "505 Montgomery Street site"; 1990b:5, Fig. 2-1, 17)

TABLE 4.2, continued

Recorded Sites in and within one Mile Of The Route 480 Terminal Separation Project

PREHISTORIC SITES	SITE TYPE/NUMBER		DESCRIPTION/LOCATION/SELECTED REFERENCES*
	Building/ District	Ship/ Ship Parts	
			CA-SFr-118H Mostly Hoff's Gold Rush General Store site (EuroAmerican and Chinese artifacts) destroyed by the great fire of May 3-4, 1851, at the SW corner of Battery and Sacramento Sts. Howison's Pier (Archeo-Tec 1985a, 1986a; Pastron 1985e, 1988b; Pastron and Hattori 1990b)
			CA-SFr-119H "Two, perhaps three, small structures [and associated material] that existed btwn late 1849 and the close of 1851"; located at the NW corner of First and Second Sts. btwn Mission and Minna Sts. (Archeo-Tec 1986b; Pastron n.d.a, 1986a, 1990b:15-16 "100 First Plaza")
			CA-SFr-120H 1880s Chinese laundry/residence and a cluster of Scandinavian sailors' boarding houses and saloons along the waterfront; near the intersection of Howard and Steuart Sts. on SE quadrant of block bounded by Mission, Steuart, Howard, and Spear Sts.; S end of block (Archeo-Tec 1986f, Pastron 1986b:"Rincon Center"; Archeo-Tec 1988b; Pastron 1990b:17)
			CA-SFr-122H "Compacted, artifact-laden living surface and adjacent, perhaps associated, transiently occupied tent remains, both of which appear to date from the latter half of 1849" located on the S side of Pine St. btwn Battery and Sansome (Pastron 1984b, 1988a:"235 Pine Street"; Archeo-Tec 1989a)
			CA-SFr-123H Gold Rush Chinese store "destroyed, perhaps with explosives to serve as a fire break, during the fire of May 3-4, 1851," on NE corner of block bounded by California, Kearny, Sacramento, and Grant Sts. (Mason Tillman 1986; Pastron and Walsh 1988c:"600 California site")

RECORDED SITE TOTALS

6 Prehistoric	31 Historic-Era Sites
18 Bldg/Distr	5 Ships
	8 Dumps/etc. (not including ship related)

4.3 RESEARCH FRAMEWORK

In the context of a Federal undertaking, the legal significance of cultural resources is critical because it determines whether the properties "should be considered for protection from destruction or impairment" (36 CFR 60.2). Impacts to historic properties listed or eligible for listing in the National Register of Historic Places (NRHP) must be considered in accordance with the regulations of the Advisory Council on Historic Preservation set forth in 36 CFR 800. Insignificant cultural remains usually do not require management consideration.

The process by which one determines the NRHP eligibility of a property is set out in the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (48 CFR 44716-44742). The first task is to construct a Historical Context statement. The context is a narrative that describes the theme, period, and region within which the property has significance. For example, a context statement might focus on "Industrial Development in San Francisco, 1849-1906." The narrative defines the characteristics of the historic theme (industrial development) during a defined period (1849-1906) in a specific location (San Francisco).

4.3.1 NRHP Criteria for Evaluation

The significance of a historic property is measured against the NRHP Criteria for Evaluation, which are applied with reference to the context statement:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and,

(a) That are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) That are associated with the lives of persons significant in our past; or

(c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) That have yielded, or may be likely to yield, information important in prehistory or history [36 CFR 60.4].

While examples of all categories of properties--districts, sites, buildings, structures, and objects--may be judged in relation to any or all of the criteria, the significance of archaeological properties is usually assessed by applying criterion D. This criterion stresses the importance of the information contained in an archaeological site rather than its intrinsic value as a surviving example of a type or its historical association with an important person or event.

To assess whether a property is likely to contain important information, the researcher must prepare an archaeological research design. This document identifies the important questions that could be addressed by the kind of data that the property is likely to contain and that cannot be obtained from other sources. In the case of an iron foundry, for example, some research questions would concern the technology of iron working.

Many cities, particularly on the East Coast, have developed archaeological research designs that enable workers to coordinate the sampling of archaeological strata representing households of different social, economic, and ethnic affiliation, and of various industrial and commercial facilities (e.g., Charleston, North Carolina, and Alexandria, Virginia). These documents often focus on areas facing development, and discuss the potential of specific properties to contain important archaeological resources. By providing clear guidelines and eliminating the duplication of historical and archaeological research efforts, these tools ultimately prevent the waste of both money and research potential.

Although considerable archaeological research has been carried out in San Francisco and archaeologically oriented, historical overviews have been prepared ad hoc in connection with several construction projects adjacent to the central business district (e.g., R. Olmsted et al. 1979), no formal research design has been prepared that identifies city-wide research priorities (Pastron, Hattori, Walsh, and Delgado 1990:104-105). Consequently, in order to follow the Federal guidelines, it is necessary to construct a research design for the SF-480 project. The research design addresses prehistoric and historic archaeological properties in separate sections.

4.4 PROPERTY TYPES

The definition of what constitutes "important" information is related to the property type being assessed. Property types associated with each context statement--such as iron foundries, machine shops, and ship breakers--are composed of individual resource types which specify the

types of features that can be expected to occur archaeologically. Under the property type 'iron foundry,' for example, one could include resource types such as the casting floor, cupola, and industrial refuse dumps, and address issues concerned with the history of technology.

4.4.1 Historic Archaeological Property Types

As described above, a property type is a grouping of properties that share some important characteristics, such as dwellings in the Queen Anne style and the rock art form known as the California desert intaglio, respectively. Historical research and the individual research designs that follow suggest that examples of five historic-period archaeological property types may be present within the SF-480 project area. These property types are: (1) domestic occupation sites, (2) commercial sites, (3) industrial sites, (4) landfills, and (5) buried ships. The complex array of behaviors and functions represented by each property type is reflected in the individual resource types that make up each property type.

Domestic Occupation Sites

Examples of this property type--which may occur in association with residences, schools, etc.--may be expected to contain resource types that share the characteristic of being hollow features that, before the days of organized refuse collection, were used as receptacles for the by-products of everyday living: discarded ceramics, food bones, glass containers, broken personal items, etc. These hollow features include wells, cisterns, subterranean basements, outhouse pits, and lined, reusable garbage pits, and are all sources of assemblages of historic artifacts. These kinds of features and their contents may have legal significance stemming from their research potential.

In addition, domestic occupation sites frequently contain deposits of sheet refuse, upcast, and intentionally brought in fill that accumulate on the horizontal plane and that sometimes build up to several feet in depth. Because they create sealed contexts for caches of artifacts, these deep sheet deposits often yield artifact assemblages that may be used for the same type of analysis as the discrete refuse caches described above. In addition, they can provide evidence of change over time in a way that discrete caches--often the result of sudden, transitional changes--cannot. The reconstruction of backyard use, functional layout, and vegetation may be possible by means of continuous pollen samples obtained from this type of archaeological deposit (see Section 4.8.5.3).

Commercial Sites

Refuse caches and sheet deposits of refuse and fill, similar to resource types that occur on domestic sites, may also be expected on commercial sites. The artifact collections, however, will reflect the orientation of the business that contributed to it. Three principal types of commercial establishments have been identified in the study area: retail stores, hotel/lodging houses, and saloons. Collections contained in property types related to retail stores may be expected to contain broken or unsalable goods. Enterprises such as the Miners' Hotel can be expected to have produced refuse-rich features that are similar in structure and function to those of domestic sites.

Industrial Sites

Examples of two potentially important industrial property types may be present in the study area: the foundry and the blacksmith's shop. Each property type would have been composed of a number of discrete elements that reflect the technology involved. Each of these components is considered to be a resource type with its own research potential. For foundry sites, these resource types include coke ovens and fuel storage areas; woodworking shops and wood storage areas; coke furnaces; flask storage areas; iron storage areas; cupola furnaces; casting floors; and machine shops. A traditional blacksmith shop contained four functional spaces, each of which can be archaeologically recognized and is considered a resource type: the work area, the general storage area, the 'domestic' area, and the refuse area.

Landfills

Examples of this property type consist of material brought into the study area to fill the mudflats of Yerba Buena cove and Mission Bay. The fill, which is upwards of 20 feet thick in some areas, contains pollen and conventional artifacts that reflect the period of deposition.

Buried Ships

Examples of this property type consist of the remains of sailing vessels and their contents that were buried by fill during the reclamation of Yerba Buena Cove.

4.4.2 Prehistoric Archaeological Property Types by Susan H. Alvarez

The project area may contain several prehistoric archaeological property types, based on evidence of site function, which include (1) Burial sites containing human remains but lacking, or having only a few, associated cultural materials; (2) Occupation sites containing human remains; artifact assemblages; materials that may provide site-specific chronological data; materials that may provide data relating to prehistoric involvement in local or regional exchange systems; and floral and faunal subsistence remains; (3) "Shellmound" or dietary debris sites in

which subsistence refuse predominates midden constituents; and (4) Lithics only sites in which stone tools and/or culturally modified lithic debris predominates or occurs without other, associated site constituents.

Human Burial Sites

This property type consists of partial or complete human skeletal remains or evidence of cremation mortuary practices that may occur as isolated interments or in a cemetery grouping of burials. Burials may or may not have more than a few associated cultural materials. Partial or complete human skeletal remains have been recovered in various types of prehistoric San Francisco peninsula environmental conditions: near marshes, drainageways, rocky cliffs, and bayshore. Human skeletal remains are reported from CA-SFr-2, adjacent to the project area. Additionally, human remains are reported, or have been recovered from, archaeological sites (SFr-6, -23, and -26) west of the study area, and one prehistoric cremation is reported from the Presidio area. CA-SFr-28 contained human skeletal remains and associated organic material that yielded radiocarbon determinations of approximately 5,000 years B.P.

Occupation Sites

This property type may contain human remains as well as flaked lithic tools and/or flaking debris; formed or fragmentary bone, shell, or wood tools; groundstone; charmstones; bone or shell ornaments, tubes, whistles, and/or ceremonial equipment; imported materials such as mica, crystals, ochre, and/or obsidian; cooking stones; heat-affected rock; and/or features such as hearths and/or ash or charcoal concentrations. Regional research has demonstrated that these types of materials are characteristic of technological skills and devices, economic modes, and mortuary and ceremonial practices relating to specific cultural patterns.

Additionally, this site type may contain organic and lithic materials that may be subjected to either radiocarbon or obsidian rim hydration analyses, respectively, for site-specific dating. Human remains and/or associated organic materials from the northern tip of the peninsula have yielded two radiocarbon dates, 4,900 +/-250 radiocarbon years and 1210 +/-85 B.P. Radiocarbon dating techniques were applied to charcoal and shell from two Fort Mason sites and resulted in determinations of 1475 +/-100 B.P. on the charcoal and about 1700 radiocarbon years on the shell (CA-SFr-29 and -30, respectively). Obsidian specimens from CA-SFr-112 subjected to hydration rim analysis resulted in a range of 1.6 to 3.6 microns, which fall into the temporal range of about 200 B.C. to A.D.1500 or from the interface of the Middle/Upper Archaic periods to the interface of the Lower/Upper Emergent periods.

Imported materials such as obsidian, mica, ochre, crystals, and asphaltum may occur singly or in combination to provide information relevant to understanding prehistoric involvement in local or regional exchange systems. Finally, floral and faunal subsistence remains may

demonstrate cultural adaptations to local environments and changes in biotic communities over time, as well as provide data pertinent to understanding prehistoric dietary practices.

"Shellmound" or Dietary Debris Sites

This property type, known as "shellmounds" because of their high level of shell material compared to other constituents occurring in a mound form, are numerous in the San Francisco Bay region. Shellmounds, either singly or in clusters of three or more, are characteristically in close proximity to the prehistoric bay shoreline or occur on ocean cliffs or bluffs between northern Sonoma County and Monterey County. The lower levels of some shellmounds are below the present water level. N.C. Nelson (n.d., 1909) mapped 18 shellmounds on the northern San Francisco peninsula, including CA-SFr-2 adjacent to the project area; he excavated both SFr-2 and SFr-7, which lies south of the project area. Shellmound midden constituents are dominated by marine resource subsistence refuse but may contain terrestrial faunal remains as well as human remains and cultural materials.

While shellmounds largely represent refuse sites associated with collection and processing of marine food and material resources, they also represent adaptation to bay and coast environments. Additionally, they may contain evidence of (1) changes in marine micro-environments subsequent to earliest site use; (2) local interaction with interior people who visited the bay area; and (3) seasonality and duration of occupation. Such evidence may include, but is not limited to (1) stratigraphic occurrences of different quantities of tools, and shell and/or bone material in association with identifiable stratigraphic changes in natural phenomena, such as soils and vegetal material; (2) imported materials and cultural traits; (3) materials to which dating techniques may be applied to establish time-depth; (4) diversity of subsistence refuse; and (5) food collecting and/or processing techniques.

Lithics Only Sites

This property type is characterized by site constituents consisting solely of, or dominated by, lithic materials representing task-specific site use. Lithic materials that may be present at a lithics only site include, but are not limited to, any of the following, singly or in combination: formed flake tools, flaking debris, groundstone material, fish net weights, and/or charmstones. Modified lithic debris dominates site constituents.

Lithic materials such as those listed above may represent tool manufacturing, food and material resource procurement and/or processing, and/or ritual or ceremonial activities. Additionally, stone tools frequently exhibit characteristics that are evidence of technological development; as such they can demonstrate temporal and areal relationships with cultural developments in other geographic regions.

4.5 INTEGRITY

Integrity refers to the degree to which a property has retained the character it possessed during its period of significance. The NRHP recognizes seven types of integrity, each of which addresses a different component of this important quality: location, design, setting, materials, workmanship, feeling, and association. A property must possess integrity in those areas that are relevant to its area of significance. The level of integrity that is necessary to qualify examples of various property types for NRHP listing under criterion D is measured by the ability of the remains to contain the types of data necessary to contribute to the research issues identified in a formal research design (NPS 1991:23). In this way, a fragmentary example of a property type, which under other approaches might be considered insignificant because of its lack of integrity, can be said to have legal significance if the remains are of an identifiable resource type which has the potential to yield important information. Furthermore, for a property to be eligible under criterion D, it is not necessary for it to visually evoke an event, person, or process. In this context, integrity means that the archaeological property is "sufficiently intact to yield the expected important information" (NPS 1991:23).

For the purposes of NRHP criteria A and C, a buried ship, for example, would possess excellent integrity of location and setting because it would be situated in the same place where it was deposited during its period of significance. Integrity of design, materials, and workmanship can be assumed to be present because any alterations, except disturbance from construction or similar activities, would have been made during the vessel's period of significance, which ended when it was buried.

4.6 RESEARCH THEMES: PREHISTORY by Susan H. Alvarez

A variety of research themes can be addressed using prehistoric sites in well-studied areas, especially when excavation data are augmented by site-distribution information and ethnographic data. In the San Francisco area, however, archaeological investigations have focused on a few individual sites or small clusters of sites that have escaped destruction or burial, or on fragments of deeply buried sites encountered during construction excavation. Deposits identified on the SF-480 project can be expected to be little more than arbitrary slices of prehistory.

Despite the narrow view anticipated, some deposits may have high integrity. Many small or surficial prehistoric sites will have been destroyed by the sudden influx of Euroamericans in 1849-1850, who settled in densely populated camps in the same locations that would have been

avored prehistorically. Many others, however, will have been buried intact--either by the centuries-long accumulation of dune deposits, or by the placement of imported landfill in the 1850s. This is especially the case for sites now well below the modern shoreline, which are likely to reflect considerable time depth.

Given the restrictions of the current project and the limited local data base, research themes must be directed toward reasonably accessible, modest goals. Anticipated deposits within the project area may yield (1) site-specific data to reconstruct adaptations to local environments and changes in biotic communities over time and (2) artifact associations and datable materials to augment our understanding of the temporal and spatial affiliations of prehistoric San Francisco.

Theme A: Environmental Change

Within the project area, prehistoric marsh edges, bayshore, and nearby terraces overlooking a stream valley are potential settings for archaeological resources. Sites in these settings would contain evidence of heavy reliance on bay resources, whose sensitivity to environmental fluctuations makes them good indicators of climatic change. Constituents in these deposits will have the potential not only to reflect changes in the environment, but also cultural responses to these changes, if the following conditions are met:

- They occur below thick layers of silt or old dune sands;
- Stratigraphic levels are marked by faunal, floral, and soil changes;
- Cultural materials within stratigraphic levels indicate changes in mode of subsistence procurement and/or processing.

Statements about settlement and subsistence, of course, can only be made if rich and diverse deposits are serendipitously encountered. The absence of traits or materials in so small a sample will be inconclusive.

Theme B: Temporal and Spatial Affiliations

Central California has been characterized as a series of generally uniform contemporaneous assemblages with many minute regional differences (Elsasser 1978:41). The majority of the recovered artifact assemblages from San Francisco sites, however, consist of typologically unclassifiable artifacts. Thus it is uncertain whether the occupants of the northern San Francisco peninsula conformed in general to evolving regionwide settlement, subsistence, and exchange

patterns and in what ways they were distinctive. While there are abundant comparative collections from elsewhere in the Bay Area, San Francisco has yielded so few temporally sensitive materials that mere cross-dating is unsatisfactory. The excavations at CA-SFr-112, for example, yielded numerous netsinkers--a distinctive Middle Horizon trait in East Bay and Marin County sites--from a deposit otherwise firmly dated to Phase 1 of the Late Horizon. The paucity of information from San Francisco does not allow discrimination as to whether these artifacts represent a notable northern peninsula trait for this time frame, a distinctive, localized, anachronistic trait (Pastron and Walsh 1988b:89), or whether the site itself was inaccurately dated.

Small samples of obsidian, however, have provided information on the timing and extent of prehistoric interaction and suggest that Upper Archaic and Emergent Period San Francisco was linked to a wide exchange network. Obsidian from CA-SFr-112 and -113 has been sourced to eight sources: Casa Diablo; Bodie Hills, Mt. Hicks, Pine Grove Hills; Napa Valley; Annadel; Mt. Konocti; and Borax Lake. As more sourcing information is amassed and stratified by time, comparison of San Francisco data with the vast samples from other regions will provide a fuller picture of the nature and timing of regional integration.

With each of these small glimpses into San Francisco prehistory, the data base grows. If prehistoric archaeological deposits are encountered during the SF-480 project, especially ones with the integrity outlined above under Environmental Change, important information may be recovered despite the small sample size. Even a few stylistically distinctive artifacts, if present, will add greatly to current information. Cross-dating of such materials, however, should be resisted, as the netsinkers from CA-SFr-112 have shown. Datable materials--obsidian and potential radiocarbon samples--should be analyzed wherever they are found in good association with stratigraphic breaks or assemblages of stylistically or functionally distinctive artifacts in an attempt to gather as much pertinent information from these small samples as possible.

Theme C: Prehistoric Peninsula Site-Specific Adaptation

Recent research in coastal archaeology highlights the advantages of marine environments for prehistoric human adaptation. Coastal shell midden sites are highly visible and, occurring throughout the world in varying coastal environments, provide comparative data for studies focusing on marine resource influences on site use as well as larger, cultural process.

In California, T. Jones (1991) developed a model for assessing patterns and variations in the earliest prehistoric coastal settlement and marine resource use. In a more spatially restricted study, Glassow et al. (1988) analyzed Santa Barbara Channel archaeological and paleoecological

data in order to identify trends in human behavior within the context of a changing natural setting.

Coastal studies frequently narrow the geographic range to specific sites or clusters of sites within close proximity of one another and use data to address widely varying topics such as the evolution of coastal adaptation (Braun 1974), coastal sedentism (Lightfoot et al. 1987), and the nutritional benefits of a shellfish economy (Erlandson 1988). While the present study area is small in size, data recovered from the anticipated deposits can be compared with the San Francisco peninsula prehistoric data base as well as the results of the considerable work accomplished on the east bayshore and in surrounding bay area environs. The current data base, for instance, provides information regarding the relationship between known sites and the prehistoric environment which facilitated a predictive model for potential project area site locations. In several studies (Holman et al. 1977; Baker et al. 1978), dating techniques and limited faunal analysis were applied to site constituents, resulting in site-use hypotheses.

Observable patterns in the current body of archaeological data for the San Francisco peninsula indicate that people settled and made their living near marshes adjacent to the bayshore and, at the very least, fished, collected shellfish, and hunted sea mammals from rocky cliffs overlooking the Pacific Ocean and the bay. The data also show that local occupants had access to imported materials and shared various regional cultural traits. The level of involvement in exchange of goods and ideas, however, has not been determined. Within the known land-use framework, evidence of the nature of site function--that is, occupation, subsistence collection and/or processing, or lithic tool manufacture or use--will contribute to the understanding of human adaptation to the prehistoric San Francisco peninsula. Site function may be hypothesized if data analysis

- demonstrates specific functional differences (e.g., differences associated with procuring or processing foods).
- suggests that the faunal inventory is representative of a full complement of marine and terrestrial animals available in the bayshore ecotone (i.e., use of all species may indicate sedentism rather than seasonal site use).

Theme D: Regional Exchange

Evidence of the level of involvement in a regional exchange systems may be indicated if site constituents:

- include either a wide variety or a limited amount of imported materials (e.g., imported goods ranging from a number of ceremonial items to raw materials or only finished and/or reworked tools rather than, for instance, obsidian cobbles or cores).

4.6.1 Research Questions

The above research issues stimulated the following explicit questions:

1. Will site constituents occur in stratigraphic levels that also suggest alterations in the micro-environment(s) over time? Will cultural materials within stratigraphic levels indicate changes in mode of subsistence procurement and/or processing that suggest human responses to alterations in the local environment?
2. Where specific functional site differences can be discerned, is sedentism rather than seasonal site use suggested? Does comparison of the project-area material and the current peninsula data base suggest patterns or variations of prehistoric adaptation to the local environment?
3. Do the data suggest a local level of involvement in the regional exchange system? How do materials representing imported goods and ideas at this site compare with other San Francisco finds?
4. Are there temporally sensitive artifacts that suggest a temporal and spatial relationship with east and north bay cultural sequences? Does identifiable variation occur that suggests zonal differences in the environment such as that identified by Beardsley (1954) in the Marin Littoral zone, or variations due to the isolated nature of the San Francisco peninsula?

4.6.2 Expected Prehistoric Resources

There is a low potential for the presence of prehistoric cultural sites on Blocks 1 and 2, which lie north/northeast of the former shoreline, and possibly in Block 3, which was an area of shoreline fluctuation. Due to fill accumulation within the small stream valley between Nob and Rincon hills, there is high potential for encountering buried prehistoric cultural material during

construction activities in Blocks 4 and 5. Similar accumulated fill covers the south-facing slope of Rincon Hill. Due to the slope's proximity to a formerly large marsh, the possible presence of a named ethnographic village *sitlintac* in the location, and the proximity to previously recorded archaeological sites, Blocks 9 and 10 have very high potential for buried prehistoric materials. While Blocks 6, 7, and 8 are on former mid- and upper-slope elevations and it is unlikely that construction activities will encounter prehistoric archaeological evidence of occupation, the potential for evidence of ritual and ceremonial use or of campsite activities associated with prehistoric territorial concerns cannot be entirely dismissed. Table 4.3 presents the potential for prehistoric cultural materials being present on Blocks 1 to 10, along with examples of types of materials that may be present. Such materials may include, but are not limited to, lithic materials, shell and bone beads, bone tools, heat-affected rock, dietary remains, locally darkened soil (midden), micro-constituents (e.g., pollen or fish remains), and/or human remains.

Table 4.3: Potential for Prehistoric Archaeological Resources by Block

Block #	Sensitivity	Expected Cultural Remains
1	Low	Tools associated w/fishing and birding (e.g., charmstones, net weights, points)
2	Low	Same as 1
3	Low-Moderate	Same as 1; dietary remains, stone and/or bone tools
4	High	Cooking stones/pits; lithic materials (flakes and tools); bone tools; dietary debris
5	High	Same as 4; midden development, milling equipment
6	Moderate	Evidence of campsite activities
7	Moderate	Same as 6
8	Moderate	Same as 6
9	Very High	Same as 5; CA-SFr-2; possible location of <i>sitlintac</i>
10	Very High	Same as 4, 5, 9; tools and/or dietary remains associated w/marsh environs

4.7 RESEARCH THEMES: HISTORICAL ARCHAEOLOGY

While San Francisco has no formal research design for historical archaeology, workers in Sacramento have identified several general research themes that, with some modification, have been found to be applicable to the archaeology of San Francisco. These themes, which are outlined below, are broadly defined so as to be pertinent to most urban areas which have an adequate archaeological and documentary record. Some of these issues require the analysis of only one deposit; others must be examined at the parcel, block, neighborhood, city, or even inter-city level. Thus complete answers to all, or even most, of these questions would be outside the

scope of mitigation of impacts to the archaeological deposits of the present project area. However, the scientific recovery, curation, and analysis of these deposits would add to the available collections of comparative archaeological data and facilitate on-going scholarly research on these important themes.

Themes A through E define research or information potential necessary to qualify archaeological resources as significant under NRHP criterion D; Theme F defines interpretive potential and classes of resources important for their public values.

Theme A: CONSUMER BEHAVIOR/SOCIAL AND ECONOMIC STATUS

Specific Questions:

1. Does this resource enable us to describe the consumer practices and disposal behavior of members of a specific social, occupational, economic, or ethnic group (i.e., material remains associated with a specific household)?

2. Does this resource add to our knowledge of the availability of various classes of consumer goods at a specific place and point in time (i.e., material remains associated with a mercantile establishment)?

Examples: Butler 1979; Praetzelis and Praetzelis 1990a; Spencer-Wood 1987

Data Requirements and Analytical Approaches:

Archaeological: feature and/or layer interface

Historical: associated with specific household/business

Ceramics: Miller's (1980) economic scale

Faunal remains: economic scaling and ranking of butchering cuts (Lyman 1987; Schulz and Gust 1983)

Ceramic and glass function: MNI frequency/proportion

Social science: explicit social, economic, and status categories

Household demography: size, composition, life-course

Theme B: URBAN HOUSEHOLDS

Specific Questions:

1. Does this resource add to our knowledge of adaptive behavior in urban settings associated with the acquisition and consumption of foodstuffs or the organization and use of space?

2. Does this resource, in combination with other classes of data, aid in the understanding of landscape alteration, water and waste management, outbuilding construction, and dwelling renovation as these relate to changes in household composition?

Examples: Beaudry 1986; Henry 1987b; Mrozowski 1987

Data Requirements and Analytical Approaches:

Archaeological: feature and/or layer interfaces; broad exposure

Historical: associated with specific household

Architectural: style, size, location, additions, outbuildings

Faunal remains: frequencies of types/domesticates/wild; presence/absence of types; butchering cuts

Botanical remains: frequencies of types/domestic/wild; presence/absence of types

Ceramics: Miller's (1980) economic scale

Ceramic and glass function: MNI frequency/proportion

Archival information: merchants' and householders' accounts

Household demography: size, composition, life-course

Theme C: URBAN GEOGRAPHY

Specific Questions:

1. Does this resource aid in our understanding of the beginnings of urban planning--water supply and storage, trash and sewage disposal, fire protection, drainage--in this city?
2. How does this resource reflect changing land use: the changing functional and spatial organization of the city?
3. What information about neighborhood formation (i.e., residential differentiation and the emergence of homogeneous neighborhoods along social and economic lines) is available from this resource?

Examples: Ostrogorsky 1987; M. Praetzellis et al. 1980

Data Requirements and Analytical Approaches:

Archaeological: period interface composed of feature and layer interfaces

Historical: land-use study, patterning identified from archival sources

Environmental: reconstruction of local vegetation based on pollen record

Theme D: ETHNICITY/URBAN SUBCULTURES

Specific Questions:

1. Does this resource reflect the rise or relative influence of Victorianism as a class-based ideology?
2. Does this resource possess material remains that could elucidate the relative influences of economic class and the development of mass production and world trade on the material manifestations (i.e., artifacts) of ethnic and subcultural distinctions?
3. Does this resource possess material remains that could elucidate the role of symbols (i.e., artifacts) in defining and maintaining boundaries between groups?
4. Does this resource contain evidence of the relationship between competition among social groups and their social distance?

5. Can this resource help us to understand the dynamics of cultural pluralism and social stratification during the 19th century?

Examples: Felton and Schulz 1983; McGuire 1982; A. Praetzellis et al. 1987; M. Praetzellis et al. 1988; Praetzellis and Praetzellis 1992; Staski 1987

Data Requirements and Analytical Approaches:

Archaeological: period interface composed of feature and layer interfaces; many sites

Historical: specific historical associations for each stratum

Architectural: style, size, location, additions, outbuildings

Archival: ethnic identification, historical background

Household demography: size, composition, life-course

Social science: explicit social, economic, and status categories

Ceramics: Miller's (1980) economic scale

Faunal remains: economic scaling and ranking of butchering cuts (Lyman 1987; Schulz and Gust 1983); frequencies of types/domesticates/wild; presence/absence of types

Ceramic and glass function: MNI frequency/proportion

Botanical remains: frequencies of types/domestic/wild; presence/absence of types

Environmental: reconstruction of local vegetation based on pollen record

Theme E: INDUSTRIALIZATION AND TECHNOLOGICAL INNOVATION

Specific Questions:

1. Does the property contain evidence of undocumented or poorly documented industrial processes that could add significantly to our knowledge of the development of this industry?

2. Does the property contain evidence of local innovation, or "appropriate technology," as opposed to the adoption of standardized tools and materials?

3. Does the property contain evidence of the effect of industrialization/corporate capitalism on the social organization of work?

Examples: Beaudry and Mrozowski 1989; Light and Unglik 1984; Stewart et al. 1979

Data Requirements and Analytical Approaches:

Archaeological: feature and layer interfaces reflecting specific processes, by-products, and work spaces

Historical: association with documented industries

Archival: company records, history of technology

Theme F: INTERPRETIVE POTENTIAL

Specific Questions:

1. Does the property have public interpretive potential? For example, could the site provide information about the lifeways of a poorly documented ethnic or occupational group or important local industry that could be valuable in presenting that aspect of the city's history to visitors and residents?

2. Does the property contain artifacts that are particularly evocative of a period or important process in San Francisco's history and that could be used to interpret the past in a museum or public display or as a tangible, hands-on component of a teaching unit for use in public schools?

Examples: Maniery and Costello 1986

Data Requirements:

Archaeological: artifacts with well-documented historical associations; particularly evocative, representative, or striking artifacts

4.8 RESEARCH DESIGNS FOR EXPECTED HISTORIC ARCHAEOLOGICAL RESOURCES: GENERAL INTRODUCTION

In order to evaluate and appropriately treat examples of the diverse group of historic-period property types and resource types identified above, five research designs and an artifact class-specific study have been prepared. Each research design contains an overview of previous studies of the same property type, an explanation of the research and/or intrinsic values contained within the property type, and a description of the historic processes and events that would have contributed to the creation and the character of the property type in the study area. Finally, the Research Themes identified above are developed in relation to the property type, and relevant research questions and their data requirements are specified. The property types are: domestic occupation sites, commercial sites, industrial sites, landfill, and buried ships. In addition, one class of cultural remains that may be associated with several of the property types--faunal remains--is treated in detail.

4.8.1 DOMESTIC SITES: WHAT MATERIAL REMAINS OF URBAN HOME LIFE IN SAN FRANCISCO CAN TELL OF 19TH-CENTURY LIFE

by Anne Elizabeth Yentsch

4.8.1.1 Introduction: Domestic Sites as an Archaeological Resource

Archaeologists customarily find a range of artifacts whenever they excavate domestic sites. Normally, these fall into eight major classes of materials: ceramics (remnants of eating utensils); glass (remnants of drinking vessels, beverage containers, and medicinal bottles); bone (from food refuse, pets, and commensal animals); seeds, nuts, other macro plant remains (usually from plant life used as food, except in the case of charcoal); broken tobacco pipes; small finds (buttons, hooks and eyes, items of adornment); and ammunition (a variety of lead shot ranging in size from cannons down to birdshot). One of the largest classes is architectural debris resulting from taking down and putting up housing (brick, nails, cement, an occasional piece of wood). Wood and most metal are poorly preserved in soils. Archaeologists additionally find features--the remains of buildings, paths, old roads and driveways, garden beds, privies, wells, cisterns, fences, tree-holes, etc.--that let them infer architectural patterns or uses of space, and identify activity areas on home lots.

In an urban area, high population density, a concentrated, intensive use of space, and rapid change of site occupants combine to create extremely complex archaeological deposits (Beaudry 1986; Staski 1987). In such a situation, it is most cost-effective to record stratification but reserve for intensive study the artifact assemblages (refuse caches) found in sealed deposits. These deposits have other advantages: They are literally small time capsules, normally created within a very short span of time (M. Praetzellis et al. 1980), which can often be easily dated. They can tell us how life in the city varied depending on household type. In San Francisco, some households were distinct from others based on the cultural identity of their occupants (cf., Chinese and East Asians, Mexicans and South Americans, African-Americans, and Northern Europeans). But households also varied based on their composition (kin as opposed to non-kin), their proximity to the work place, their mode of operation. A variety of modes of operation are possible: as a family home; as multifamily homes; as homes where families took in boarders; as female-headed households where families took in boarders; as commercial residential establishments where kin ties were few or nonexistent, or corporate households (Beaudry and

Mrozowski 1989a); or as transient, temporary living space on a small scale (i.e., tents, even planks under roadways and flop-houses) or on a large scale (large hotels). Households also vary by the primary age or gender composition of the occupants (i.e., homes with small children; lodging houses whose occupants were primarily single men; boarding houses where old folks lived).

Income level also had an important effect on what was purchased and used within these households; it is a factor that must be taken into account (Spencer-Wood 1987). Factors such as upward or downward social mobility, education, occupation, family background, and social aspirations also played a role.

San Francisco has been described as one of the world's great 19th-century melting pots. The initial phase of the Gold Rush in 1848-1849 mainly attracted gold seekers from the United States, Mexico, Chile, China, Hawaii, England, and Australia; accompanying the political upheavals in Europe in 1848-1851, large numbers of European immigrants arrived. Bernard Taylor described native Californians, Chileans, Sonorans, Kanakas (from Hawaii), Chinese, and Malays who lived in the city. Census records record surnames from continental Europe, as well as Britain and Ireland. People came west from all the different regions of the United States, from tobacco farms of the far south and the coastal fishing villages of Maine and Massachusetts, as well as from the logging communities of the interior. One writer commented that "the lines of class and caste are often vague and shadowy" (quoted in Lewis 1962:192). Another wrote:

The practical equality of all the members of a community, whatever might be the wealth, intelligence or profession of each was never before so thoroughly demonstrated. Dress was no gauge of respectability, and no honest occupation, however menial in character, affected a man's standing. Lawyers, physicians, and ex-professors dug cellars, drove ox-teams, sawed wood and carried luggage; while men who had been army privates, sailors, cooks or day laborers were at the head of profitable enterprises [quoted in Lewis 1962:90-91].

Such comments reflect the fact that there was no existing social hierarchy in San Francisco in which newly arrived settlers were pigeon-holed. Important 19th-century representations of social status, such as differentiation in clothing styles, were largely absent, unreliable, or even inverted. A hierarchically structured urban society began to develop quickly, however, and visitors who returned to San Francisco in 1851-1853 after spending a year or more in the mining regions remarked on the transformation of the social face of the city in such matters as dress, deportment, and housing.

Within San Francisco, the frontier era passed rapidly, and a less well-defined transitional era of urban development followed. By the mid-1850s, the frontier village had acquired many of the features of the 19th-century city: it had an identifiable downtown filled with permanent masonry buildings; it had distinctive residential neighborhoods and the beginnings of industrial districts; and there were amenities identified with city life, such as piped-in gas, street lighting, and horsecar lines.

By 1861 the city had a population of 83,223 and extended from North Beach to Mission Bay (City Directory 1861:15). Except where hills were too steep for easy building or the passage of drays, or where low or marshy spots were unattractive to settlement (such as Tar Flat and portions of Block 10), the urbanized areas of San Francisco were thickly settled, though some residents lived in outlying areas in the Western Addition and Mission Districts, where small farms and market gardens formed a simulacrum of a traditional countryside. Rincon Hill, especially project Blocks 6 and 7, was the only identifiable wealthy district, where there emerged a distinctive spatial arrangement of suburban villas on large lots that was not seen elsewhere in the city at that time.

As was the case of Sacramento, the forces of progressive nationalism and Victorian ideology molded daily life (Praetzellis 1991). Like Sacramento, there were stark differences between life as presented in the public facades along Folsom Street and the social reality of the small alleys, courtyards, and massed outbuildings, ells, kitchens, communal privies, and rear-lot homes that had begun to fill the interior of Block 4 as early as 1857. It is the cultural mediations between exterior lot and interior, public facade and private reality, cleanliness and filth that archaeology lets us see--revealing them in dramatic ways that do not appear in documents.

It is the way the dialectic of continuity and change played out that archaeologists should see most vividly in the spectrum of 19th-century domestic deposits from South of Market Street. The way life changed as one rose up the social ladder, building a new life in the West within the confines of Victorian society, and the way life stayed the same, altering gradually over generations rather than within short periods of time. They should also see the creation of a distinctively San Franciscan way of life, similar to what is seen in Sacramento. This way of life will also resemble what can be seen in New York, Chicago, New Orleans, Boston, and Charleston, yet simultaneously as different from material manifestations of daily life in the Midwest and East as night is from day. The key to reading this in the archaeological record will be the questions asked of the different artifact classes.

4.8.1.2 Characteristic Data Obtained from Artifact Classes at Domestic Sites

1. Building debris, depending on its placement in the different layers of a site, can be read as indicative of construction dates, renovations and repairs, or demolition. Features, too, such as builders' trenches, contribute information on these points. In addition, they provide information on the configurations of buildings and grounds, and show how the social landscape was structured. Information of this type can be supplemented by detailed historical maps and photographs (when these are available) to yield an even clearer picture.

2. Botanical remains may be divided into macro-sized elements, such as charcoal, seeds, and nuts, and micro-sized elements, such as phytoliths and pollen. Phytoliths provide information on plants growing in a restricted area of a site and are most useful in delineating small-scale landscape elements, such as gardens. For an overview of phytolith studies see Piperno (1988a). For their application to the studies of historic landscapes, see Piperno (1988b) or Rovner (1991). For the contributions that pollen data provide to our understanding of past environments, see Section 4.8.5. Macro-remains extracted through flotation either (a) indicate what was growing at a site (if uncharred) or (b) when charred, denote the use of specific plants for food. Charcoal can reveal what woods were burned in fireplaces and for other forms of heat. As one example of plant remains found archaeologically in the city, macro-remains from the Hoff Store (ca. 1851) included peach pits, grape seeds, rice, peppercorns, and caraway seeds (Hattori and Kosta 1990). The quantity of burned seeds at a Gold Rush Sacramento site was both more extensive (in part because the sample size was larger) and different in variety. It included remains from feed for livestock: 8,200 barley grains, 1,880 oat grains, some wheat, ryegrass and barnyard grass, as well as coffee and peppercorn, fruits (peaches, blackberries, cherries), walnuts, and vegetable remains (peas and beans--possibly red or pink pinto) (Honeysett and Schulz 1990).

3. Faunal remains are one of the most useful classes of artifacts, for they tell of animal life, resource exploitation, environmental impacts of increased population, and seasonal changes in diet. They supply the broader parameters of meat use within a society enabling scholars to relate demographic variables to nutrition in a region. Because they reveal livestock and other herding practices, faunal remains are directly pertinent to agricultural history. From an anthropological perspective, bones are useful evidence in studies of ethnic differences in diet, of income and status differences, and, in a frontier community, of the different range of food sources required to feed unexpectedly large populations (see Section 4.8.3).

Bernard Taylor and others have written of the wild food resources used to feed hungry San Franciscans in the Gold Rush era: "[Winter] rains drove the deer and other animals down from the mountains, game of all kinds became abundant. Fat elks and splendid black-tailed does hung

from the doors of all the butcher-shops, and wild geese, duck and brant, were brought into the city by the wagon-load. 'Grizzly bear steak' became a choice dish at the eating houses" (Taylor quoted in Lewis 1962:90).

But by the mid-1850s, country farmers--including some Chinese in the Mission Creek area (Olmsted 1986)--green grocers, and produce wholesalers had built a prolific market system supplying provisions to the city. In Rae's description, one can see the shift in foodways that accompanied urban growth:

A walk through the markets . . . [convinces one] the necessities of life are [profusely] furnished. . . .Fish and game are plentiful and cheap. All the common fruits and vegetables are to be had for a trifle, while fruits which are luxuries elsewhere are here within the reach of the multitudeThe change from winter to summer is discerned with difficulty in the market-place. . . . there is neither seed-time nor harvest. In this favored city potatoes are always new and strawberries always in season. The size of many products of the garden and orchard is gigantic [quoted in Lewis 1962:169-170].

Artifacts often "tell it like it was," whereas documents can be deliberately misleading and/or inadvertently mask certain facts. With food use, this extra dimension is particularly valuable. Archaeologists in Sacramento have found that, while rabbit was on the menu at Cronin's Oyster Saloon in the 1870s (and probably served as roast California hare), there is a good chance that squirrel (which tastes somewhat like rabbit, but was not on the menu) was its substitute in soups and stews, since both rabbit remains and squirrel were recovered (Praetzelis and Praetzelis 1980).

Assessing the faunal remains from the Golden Eagle Site in 1980, archaeologists could see the same change, from native wild species to domestic sources, indicated in the travellers' statements above (M. Praetzelis et al. 1980). Fresh meat and fish were obtained from wild sources and sold in the marketplace, including squirrel, rabbit, muskrat, dabbling and diving duck, quail, snow goose, blackbird, salmon, surfperch, sturgeon, and thicktail chub. As Sacramento grew, eastern catfish were introduced into the rivers (from whence they found their way into African-American refuse deposits [Praetzelis and Praetzelis 1992]); exotic domestic animals were raised in the region alongside the barnyard trio of cow, pig, and sheep; domestic chickens and turkeys took the place of game birds. Yet recently, a zooarchaeologist familiar with California faunal materials also concluded that "a variety of consumption patterns of livestock meats existed among the Euroamerican population," not all of which are fully understood (Simons 1989:10).

5.3.9.4 Recommendations for Testing

One footing is proposed for the Silver Street Kindergarten site; five footings have already disturbed the site during the original freeway construction. Two additional proposed footings and five shafts may encounter domestic deposits associated with the Perry Street residences. Archaeological investigations were initially proposed for the footing within the Silver Street Kindergarten overlapping into the backyards of 29 and 33 Perry; for the footing at 21 and 23, the shaft at 5 Perry Street; and for the shaft near the corner of Third and Perry streets for evidence of prehistoric site CA-SFr-2, which may underlie the historic remains.

Site investigations for contaminated soil were undertaken near the corner of Third and Perry due to the presence of a machine shop nearby in the early 20th century. Soils not classed as hazardous were found at 5 and 10 feet. An archaeological auger test in this location recovered no evidence of a prehistoric or historic site. Following the determination that engineering constraints will prevent archaeological excavation at proposed shaft locations, test location 9-1 near Third and Perry and original test location 9-4 at 5 Perry Street were dropped from the recommendations. Additional test locations were chosen, some outside of footing locations, to compensate for the lack of data recovery excavation prior to shaft construction.

Archaeological investigations are recommended for the proposed footing that will destroy the remains of the Silver Street Kindergarten privy on the school fence line and for the outbuildings across the fence and associated with dwellings at 35, 33, 29, 27, and 25 Perry Street (Map 5.11, 9-2). Archaeological investigations are also recommended where proposed footings may destroy domestic deposits at 21, 13, and 11 Perry Street (Map 5.11, 9-3 and 9-4), and for domestic deposits in two locations where no footings are proposed (Map 5.11, 9-5 and 9-6).

The proposed test locations on Block 9 do not appear to have the potential problems with contaminated soils encountered on other blocks. It is presently assumed that the archaeological program outlined above can be undertaken without special precautions. Prior to field work, soil borings will be taken by a team including an archaeologist of the strata believed to contain the significant archaeological deposits. Results of soil analysis will aid in determining what personal protective equipment will be required. As in all portions of the project area, the PHSO will be trained to identify and evaluate potential health risks that may be present within archaeological deposits.

5.3.10 Mission Bay Block 10

Block 10 is the only part of the SF-480 project to traverse the marshes bordering Mission Bay, which was a substantial natural inlet that appears, in part, on Map 2.2. The 1857/59 Coast Survey Map (Map 2.5) shows that wetlands extended as far as Folsom and Fourth streets, with sloughs and marshes extending into Block 10. By 1857 the eastern two-thirds of Block 10 had been filled in, and boggy ground continued almost as far as the line of Third Street. In the 1850s and 1860s, some of this land was used for market gardens, but by the 1870s, small houses and tenements filled Block 10. It would appear that the current street grades have remained unaltered since the 1870s, at the latest.

5.3.10.1 Existing Conditions/Known Surface Disturbance

1. Block 10

(a) Surface: Paved surface parking lot

(b) Disturbance: SF-480 freeway construction -- 11 footings; Other -- 4 storm drains, 1 sewer line, 1 water line

5.3.10.2 Expected Archaeological Resources

1. Third Street

(a) Prehistoric site CA-SFr-2, possible location of *sitlintac*

Shell, bone, and cooking stones were recorded on the corner of Third and Harrison at a depth of 6 feet by Nels Nelson in 1909. The remains of two adults were reportedly uncovered in the vicinity of Third and Harrison in 1910.

Sources: Section 4.6; Nelson 1909; Rudo 1982

5.3.10.3 Integrity and Significance

CA-SFr-2, the prehistoric site located on the corner of Third and Harrison appears eligible to the NRHP under criterion D based on the range and quantity of materials recorded there. It is unknown whether the site extends an additional block to the project area at Third and Perry.

5.3.10.4 Recommendations for Testing

Archaeological investigations were recommended for the proposed footing near the corner of Third and Perry streets (Map 5.12, 10-1). This investigation unit in the front of 420 Third would have looked for refuse deposits associated with the corner market/residence that stood here in the 19th century and for evidence of prehistoric site CA-SFr-2, which may underlie the historic remains. This unit would have also served as a test for the sensitivity model, which predicts low archaeological visibility and focus for the front portions of yards and buildings.

Soil borings at the proposed footing covered by test location 10-1 found hazardous soils from a depth of zero to 7 feet plus. The archaeological auger program indicated a concrete floor at 8 feet and no evidence of a prehistoric site in this location. The prehistoric site recorded nearby was found at a depth of 6 feet. If this deposit was present at this location, it appears to have been removed by historic construction. Due to the presence of contaminated soil and the lack of evidence of an archaeological deposit in this location, it is recommended that this test location be dropped.

5.4 TESTING STRATEGY

The purpose of test excavation will be to determine the presence or absence of legally important property types in areas to be disturbed by freeway construction. Some of these property types have been defined in Chapter 4. The areas to be examined were chosen using a modified version of the predictive criteria developed by Schulz (1979), as well as information about the locations of previously recorded archaeological sites and the historic-period uses of the project area.

While an investigation strategy based on predictive modeling is a practical solution to the problem of archaeological identification in the urban context, the strategy cannot take into account all potentially significant property types. In short, there are some potentially important property types whose locations are simply unpredictable. These include the remains of unrecorded buildings and structures, and the remains of '49ers whom early accounts report were buried between the tents of their compatriots in Happy Valley (Block 4 vicinity).

To a point, prehistoric archaeological sites also fall under the 'unpredictable' category. While these remains often occur in the form of shell mounds just above the high tide line, they may occur elsewhere within the study area. Thus, the strategy that will be followed for the present study is to examine the ground specifically for prehistoric materials where there is pre-existing evidence that this material may be present. Elsewhere, testing for prehistoric sites will occur concomitantly with historic archaeological sites. In accordance with the Project MOA and 36 CFR 800.11, these and other unpredicted remains will be treated as if they were NRHP-eligible.

From its inception, the archaeological component of the project was geared toward researching and examining locations where important archaeological remains are likely to be present. As described in Section 1.1.4, a model of sensitivity was developed that eliminated from intensive study those areas where it is believed that post-depositional disturbance would have destroyed all archaeological remains. The model will be tested by monitoring removal of existing footings and other earthmoving on project blocks.

5.4.1 Demolition and Construction Monitoring

The essence of the proposed testing strategy is that only the sites that are most likely to contain legally important archaeological properties will be examined. This leaves the possibility that important properties may be disturbed in locations that are not tested. Archaeological monitoring, during both demolition and construction, is a solution to this problem. In addition,

monitoring during the demolition phase may produce data that may result in some archaeological test locations being dropped, added, or moved.

Monitoring consists of an archaeologist being present on-site and observing earth moving that may encounter important archaeological phenomena. The monitor would be present until it was determined that excavation had reached the maximum depth at which important remains could be expected to occur. Should potentially important remains be found, the monitor would be empowered to temporarily redirect demolition and construction workers and heavy equipment until the discovery is evaluated.

Demolition of the existing structure will involve removal of the elevated roadway and its supports to grade, the excavation of soil to a depth of three feet around each bent footing, and the removal of certain off- and on-ramps. The entire project area, with the exception of Block 6 and portions of Blocks 7 and 8 which were leveled in the 19th century, is covered with several feet of fill soil. The presence of fill makes it unlikely that demolition will affect significant historic or prehistoric archaeological remains.

The demolition of the elevated roadway will have no effect on archaeological remains and, therefore, will not have to be monitored. Likewise, it appears that the removal of the ramps will have no effect on archaeological remains as they will be demolished to grade; according to the demolition contractor's specifications, only the material that was used initially to construct the ramps will be removed. Unless the plans change, it will not be necessary to monitor the demolition of the ramps.

Emphasis will be placed on monitoring the excavations to remove existing footings. Initially, it may be necessary to monitor all or several such excavations until the method and likely results are clear. Depending upon the demolition technique employed, this may require that one archaeological monitor be assigned to each piece of excavation equipment. The archaeological Field Director will determine the number and deployment of archaeological monitors. On subsequent blocks and where the nature of the demolition process is fully understood, monitoring will be restricted to those areas where important remains are most likely to occur and where the efficiency of test excavations will be enhanced by stratigraphic information gained from monitoring. Monitoring footing removal on Blocks 6, 7, and/or 8 could contribute important information about the effect of historic leveling on archaeological deposits. These data would contribute to the archaeological sensitivity model presented in the project research design, which must be tested as part of the identification program. The actual portions of these three blocks to be monitored will be determined after a field inspection. Where there is reason to believe that Native American archaeological materials will be encountered during footing removal in a particular portion of the Project area, an appropriate Native American consultant will accompany the archaeological monitor.

It is anticipated that the identification, evaluation, and much of the data recovery phases will be complete before construction begins. At that stage the archaeological structure of the project area will be well defined. The locations of areas to be monitored during construction should be determined at that time. Construction monitoring may be used to gather information in areas where hazardous soil prevented archaeological excavation. Methods to reduce exposure time will be developed as part of the construction monitoring plan.

5.4.2 Supplementary Historical Research

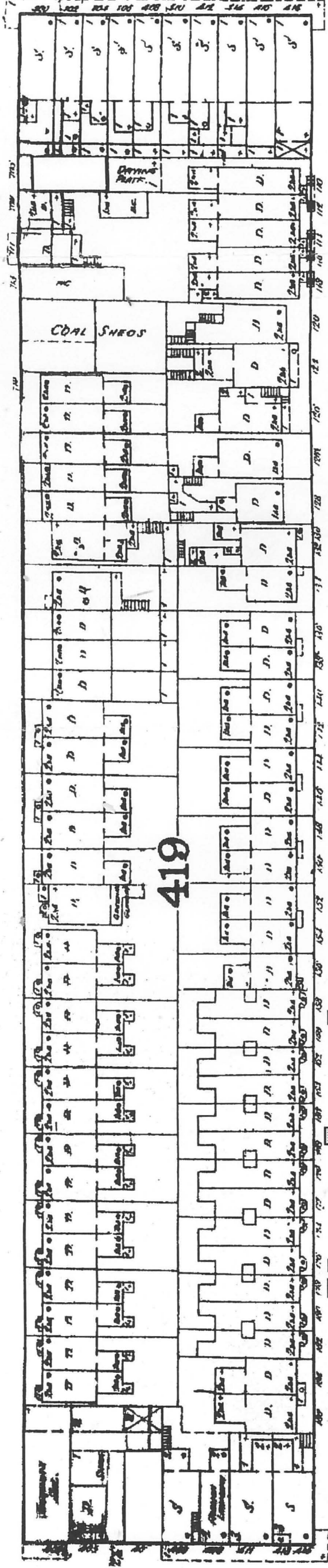
As described in Chapter 1, the Project MOA allows for the evaluation of remains without the usual evaluation procedures. This deviation from the standard Council guidelines is deemed appropriate because the project's detailed research designs and extensive historical research will allow informed decisions to be made in the field. However, it is possible, even likely, that remains will be found during testing that are not associated with the households, industries, and businesses that were identified during the archival research phase. In this situation, the properties' legal significance may hinge upon the degree to which they are documented in the written record. To allow a 'fast track' evaluation to proceed under these circumstances, project historians will remain available to perform location-specific research as needed.

5.4.3 Archaeological Testing

Prior to field work, soil borings will be taken by a team including an archaeologist in a 10-foot grid pattern covering each test location. Samples will be taken of the strata believed to contain significant archaeological deposits. Results of the chemical analysis will aid in determining the necessary personal protection equipment, as well as indicate the depth and character of the archaeological deposit. The PHSO will monitor all excavations with a direct reading instrument. If elevated concentrations are recorded, the excavators will be required to wear half-face respirators with combination organic and dust (HEPA) cartridges. If conditions persist, the trench will be abandoned. Other site-specific safety procedures are listed in the site safety plan; these will be applied according to the results of chemical analysis of soil conditions.

As a general principle, field work will not be considered for areas of high risk where Level C protection is required unless the site has potential national significance. The PHSO will be certified for Hazardous Waste Material Handling and will be responsible for ascertaining and mandating any safety precautions necessitated by the presence of contaminated soils on the site.

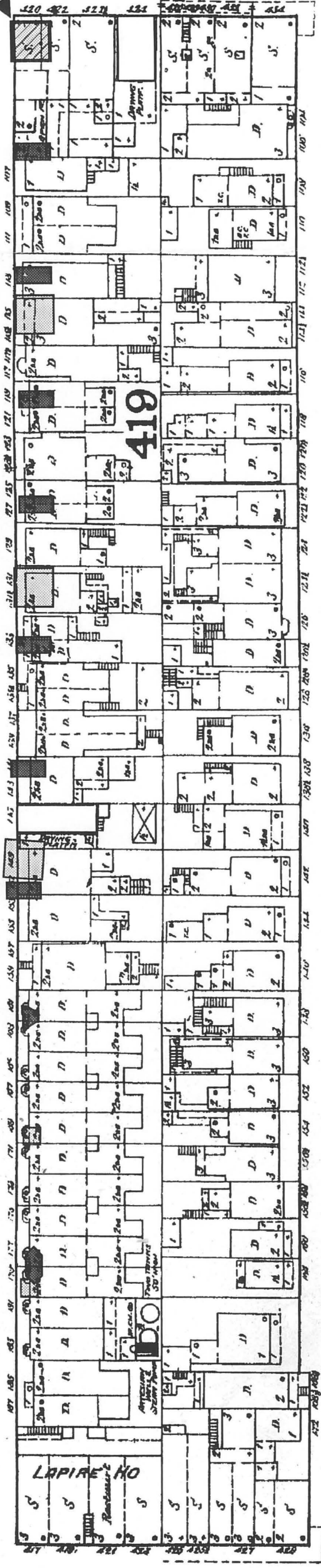
HARRISON STREET



PERRY STREET

10-1

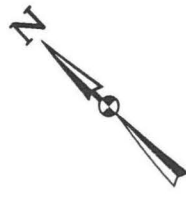
FOURTH STREET



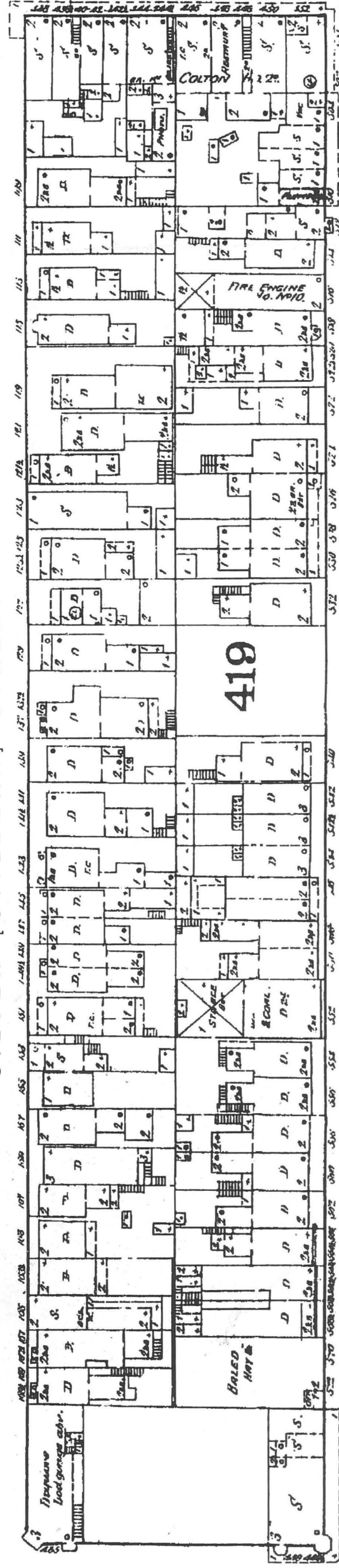
THIRD STREET

KEY

- Proposed Footing
- Existing Footing
- Proposed Archaeological Test Location
- Dropped Archaeological Test Location



SILVER [STILLMAN] STREET



BRYANT STREET

CALTRANS will provide technical assistance where necessary. Where the Field Director or the PHSO has reason to believe that hazards exist on a site, the director will cease archaeological investigations until and unless it is demonstrated that no hazards exist.

As described previously, the archaeological testing has two goals: to identify potentially important archaeological remains and to evaluate them. The identification phase presents challenges to conventional method since the archaeological deposits are covered by varying depths of fill soil. For this reason test trenching will be done with a hydraulic backhoe/loader with a 36-inch-wide bucket or a tracked excavator, depending on the depth of fill expected. In some locations it is anticipated that the fill will be sufficiently deep to necessitate 1:1 battered trench wall slopes. The immediate object of testing will be to expose previous ground surfaces (interfaces) in plan view. At the completion of a portion of trench, the top of features will be exposed in the trench floor, not in its sides. The Field Director will abandon disturbed trenches in favor of other locations. Testing will emphasize the exposure of broad areas within the APE where integrity is good and research potential is high.

As cultural features and stratification are identified during the test investigation, they will be exposed in plan by hand, photographed, and mapped in relation to some permanent datum. The evaluation phase involves determining the features' structure and stratigraphic integrity, approximate date of deposition, and range and quantity of artifacts. The approximate depth of refuse-filled pits may often be gauged by probing with a steel rod. To assess the phenomena's content and integrity, an appropriate portion of each will be hand excavated. In the case of a refuse-filled pit, for example, the feature could be cross-sectioned and part of the top layer excavated. The proper level of effort for each feature will be determined by the Field Director as the phenomena are investigated. As a general rule, a minimum amount of excavation should be performed that will allow the evaluation to be made.

Excavated soil will be passed through 1/8- or 1/4-inch screen, as appropriate to document the presence of all classes of artifacts. As noted in Chapter 4, several archaeological investigations in Sacramento have recovered the tiny bones of wild birds by use of 1/8-inch mesh. Artifacts will be catalogued in the field but need not be removed from the site. Some materials may, at the discretion of the Field Director, be reburied in their original proveniences (i.e., within the features from which they were excavated). This is particularly appropriate with regard to artifacts from features that have been determined to be nonsignificant.

Although most test excavations proposed above are designed to investigate historic period remains, prehistoric deposits may occur in these locations. For this reason, the following procedures will be carried out to ensure that any prehistoric deposits within test locations are discovered.

1. Once the historic ground surface has been exposed, it will be augered and the soil inspected for prehistoric artifacts and other site indicators. If, due to the rocky nature of the soils, auger boring proves impractical, or if auger bores contain prehistoric materials, surface test units will be hand excavated using shovel and screen recovery methods to determine the areal extent of the deposit.

2. During excavation of historic features and/or subsurface historic basement areas, side walls will be inspected for soil changes suggesting prehistoric use of the area. The discovery of locally darkened soils, ash or charcoal deposits, and prehistoric materials will be taken as indicating the presence of a prehistoric archaeological site.

5.4.4 Evaluation Procedures and Evaluation Criteria

Archaeological properties that are discovered during testing will be evaluated first for integrity. Integrity is an essential prerequisite for NRHP-eligibility. As discussed in Section 5.1 above, a property whose primary significance is in relation to the important data that it contains is said to possess integrity as long as it contains those data.

In the last analysis, for most archaeological properties, integrity is a matter of a site's research potential. This dictum, however, begs the question of the property's physical condition. The research questions attached to each property type in the project research design have archaeological data requirements that include, in addition to portable artifacts, an adequate archaeological context in the form of archaeological strata, interfaces, and features. To possess research potential, these types of phenomena must have adequate physical integrity in the form of what James Deetz (1977) has called archaeological "focus." By focus Deetz refers to the level of clarity with which the archaeological remains can be seen to represent a particular phenomenon. Remains that represent a number of activities or other characteristics that cannot be separated out from one another are said to lack focus. Where focus is lacking as the result of disturbance, a property also lacks integrity.

The following criteria will be used to assess integrity

1. Does the property have focus? That is, is it possible to interpret the behaviors that are represented by it?

2. Does the property have integrity of location and setting with respect to the arrangement of remains? That is, does the property retain a significant portion of its original contents and condition, and is it in its original location?

Properties that retain integrity will be evaluated in relation to the NRHP Criteria for Evaluation (36 CFR 60.4). The property-specific research designs presented in Sections 4.6 and 4.8 specify the applicable evaluation criteria for each property type. In accordance with the Project MOA, significance evaluations will be made together by two qualified historical archaeologists: the Field Director and a CALTRANS representative.

5.4.5 Report

A letter report will be submitted to CALTRANS at the completion of the testing phase on each study Block. This document will describe where testing was carried out and any deviations made to the procedures set out in this testing plan. Where field conditions necessitate changes to the testing plan, these modifications will be explained and justified in the report. All archaeological properties discovered will be described. The results of the evaluation process will be presented for each archaeological property.

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6. TREATMENT PLAN

6.1 INTRODUCTION

This section will describe the treatment of archaeological properties that have been determined to be eligible to National Register of Historic Places (NRHP) and that will be affected by the SF-480 project. As a treatment plan, it responds to the requirements of the Project MOA. However, unlike the highly specific strategies envisioned in the Secretary of the Interior's *Standards and Guidelines for Archaeological Documentation* (48 FR 44734-44737), the present treatment plan is generic in that it addresses the treatment of the types of deposits that are likely to be found on property types rather than identified historic properties. This unusual approach is necessitated because of the strategy--also specified in the MOA--of collapsing the identification, evaluation, and data recovery phases into a single operation. Properties that are discovered during testing will be evaluated for their NRHP-eligibility through discussions between two qualified historical archaeologists: a CALTRANS representative and the Field Director. The mitigation strategy and level of effort that is appropriate to treat individual historic properties will be determined by consultation between the same parties. In the event of disagreement between team members, a qualified third party will be consulted.

6.2 TREATMENT OPTIONS

The research design specifies a number of archaeological property types that may be affected by the SF-480 project. Prehistoric property types consist of human burial sites, occupation sites, shellmound sites, and lithics-only sites. From the historic period, property types are commercial, domestic, and industrial properties, buried ships, wharves, as well as the fill soil in which the latter two are buried. With the exception of buried ships and wharves, which may have importance under NRHP criteria A, B, and/or D, all of the expected property types are likely to be NRHP-eligible under criterion D alone. For this reason and because the nature of the project is such that construction plans cannot be altered, the treatment plan emphasizes data recovery as the most appropriate mitigation measure in most cases.

6.3 INVESTIGATION STANDARDS

All archaeological work on NRHP eligible and potentially eligible properties will be conducted according to Council guidelines as set forth in *Treatment of Archaeological Properties: A Handbook* (ACHP 1990) and *Archaeology and Historic Preservation: the Secretary of the Interior's Standards and Guidelines* (48 FR 44716-44742). Investigations will be performed under the supervision of prehistoric archaeologists, historical archaeologists, and historians whose education and experience meet or exceed the Secretary of the Interior's *Professional Qualifications Standards* (48 FR 44738-44739).

CALTRANS will ensure that all State and Federal laws and regulations respecting Native American concerns will be adhered to. An appropriate Native American consultant will monitor archaeological excavations in the possible locality of CA-SFr-2.

6.4 INVESTIGATION PROCEDURES

This section specifies field recovery and recording policies and methods, laboratory methods, and analytical techniques that may be applied to the excavated remains. Part of this discussion involves the treatment of problematic classes of properties and materials, such as pollen.

6.4.1 Field Excavation Strategies

Since no properties that will be subjected to data recovery have been identified--let alone archaeologically examined--the strategies outlined in this section will emphasize the extraction of classes of data from types of archaeological contexts that are anticipated by the various research designs. Neither the number, size, nor the configuration of excavation units can be predicted since archaeological materials and features are not evenly and homogeneously distributed within sites. Ultimately, these issues will have to be resolved by consultation between CALTRANS and the archaeological consultant as the individual phenomena are defined in the field.

Nevertheless, the discussion of property types in Chapter 4 gives a good indication of the types of archaeological phenomena that may be present. Furthermore, the research designs, also in Chapter 4, specify the types of data these phenomena may contain that may be used to address

the research questions. Thus it is possible to develop general field strategies directed toward specific property types, by which the needed archaeological data can be extracted in the most effective manner.

6.4.1.1 Excavation Strategy for Prehistoric Property Types

With the exception of human burial sites, whose special status is discussed below in Section 6.7, excavation on prehistoric sites will be oriented toward recovering data from features and concentrations of artifacts that represent units of contemporaneity. By 'unit of contemporaneity' is meant collections of artifacts that were deposited together and, therefore, represent limited and definable temporal and functional units. Since the cultural/historical sequence of the San Francisco peninsula is poorly understood, assemblages that contain dateable materials, such as obsidian or charcoal, together with stylistically distinctive artifacts would be particularly important. The descriptions of CA-SFr-2, while far from adequate as a source from which to construct a well-conceived archaeological data recovery plan, indicate a range of formed artifacts that would be conducive to cultural/historical reconstructions. Depending on conditions, broad exposures of the prehistoric ground surface and the careful excavation and fine screening of midden deposits may be indicated to facilitate the exposure of features such as hearths and house floors. Conversely, a rapid recovery strategy--wherein some deposits are excavated with a shovel and screened through larger mesh--may be appropriate to facilitate the recovery of formed artifacts and imported materials.

Although the recovery of formal artifacts would be helpful in addressing the first of the questions suggested in the research design, site-specific issues of adaptation and function require a greater range of material. This material includes dietary remains, floral and faunal remains, ground and flaked stone tools, and tool-making debris. Thus, to address questions of adaptation it would be important to accumulate a relatively large, statistically valid collection of these types of artifacts and ecofacts. The excavation of physically stratified remains would allow changes in adaptive behavior and technology over time to be addressed.

6.4.1.2 Excavation Strategy for Historic-Period Property Types

The research designs for the historic-period property types presented in Chapter 4 specify several types of archaeological resources that may contain the types of data that are necessary to address the research questions. The research questions fall into two general classes that have some correspondence with these types of archaeological phenomena: questions that require

primary deposits and landscape features that are arranged horizontally (such as furnace waste, sheet refuse, and structural remains such as building footings) and questions that require secondarily deposited assemblages of artifacts that are often arranged vertically (such as are often found in hollow/filled features such as backfilled wells, refuse pits, and outhouses).

The questions specified in the research designs for commercial and domestic sites emphasize both types of archaeological phenomena. Hollow/filled features are potentially important sources of discrete refuse caches. These features, their contents, and deposition dates can often be accurately dated and assigned to a historically documented household or business. The contents often include household ceramics, glass containers, food bone, and personal accoutrements. Features that have documented associations and a range and quantity of artifacts are among the most important potential sources of data that can be used to address the research questions. These features will be excavated in a strictly stratigraphic manner, that is, according to the physical layers of deposition. Cross-sectioning may be employed as a technique to view both the feature's structure and to sample each layer without excavating the stratum in its entirety.

Sheet refuse, the second expected resource type, accumulates on living surfaces and may be the product of primary or secondary deposition, or a catastrophic event. Such a deposit may appear as either a relatively thin layer of debris located at an archaeological layer interface or as a series of superimposed layers of substantial thickness. Primary deposits of this type, which often have the potential to address research questions concerning the spatial organization of activities, will be investigated horizontally in broad exposures. Special care will be taken in recording the spatial relationships of artifacts. Conversely, secondary depositions of sheet refuse tend to be relatively thick, reflecting their historic function as fill to raise low ground. Since primary deposits often occur at the interfaces of these layers, care is always taken when exposing these surfaces in areas such as domestic backlots. To the degree that the artifacts contained in a secondary deposition of this kind can be assigned to an identifiable historical unit at an interpretively useful scale, they are of potential value as sources of important data and will be retained. However, artifacts from fill deposits that are not associated with a household or commercial unit will not be recovered simply "because they are there" since, as specified in the research design on fill soils, the important information in such a deposit may often be recovered by recording its structure rather than its content.

6.4.2 Field Excavation Procedures

Several kinds of data must be recovered from the various property types in order to realize their research potential: the deposits' structure (including stratification and features, areal extent and depth), and content (including the nature and quantity of artifacts). In addition, the phenomena must be placed in their temporal and cultural/historical contexts. The field techniques described in the Testing Plan (Chapter 5) are, in general, applicable to data recovery level work. Additional detail is provided below.

Where physical layers of deposition are not present, excavation will be controlled by means of successive 10 cm (or thinner) arbitrary levels. This material will be excavated using hand tools and, where appropriate, the soil passed through 1/4-inch screen. To facilitate the recovery of tiny artifacts, smaller screen size may be used. Each unit of excavation will be recorded on detailed forms on which the excavator and/supervisor will note site structure and content. Artifacts will be bagged according to provenience; the bags will be marked with the provenience designation, screen size, excavator's name, and the date. In general, artifacts whose archaeological context is uncertain (i.e., unstratified finds) will not be collected unless they are of potential value for public interpretation. Excavations will be mapped in relation to existing permanent datum points. Excavations will be recorded on plan and cross-section drawings drawn to scale and photographed using 35-mm black-and-white print photographs and color slides.

6.4.2.1 Pollen Sampling Methods by G.K. Kelso

If site formation processes are to be examined, pollen must be collected in profiles of 2 cm contiguous samples (i.e., with no intervals between samples) that extend from at least 20 cm below the deepest cultural deposits to the surface. In the case of buried surfaces, the profile should extend 10 cm up into the overlying fill. The most efficient way to record these profiles is to draw the sample numbers and locations on a profile drawing of the face from which the samples were taken. When this is done, it is not necessary to go through the time consuming process of recording depth, layer and sediment description on the bag. A typical label might read "Unit 1, North Wall, Pollen Sample #23."

Sampling should start at the bottom of the profile rather than at the top. This way debris falls down and out of the way rather than contaminating the remaining portion of the face to be sampled. About 50 cc (ca. 1/2 cup) of matrix per sample is adequate. It should be placed in a plastic bag, with the label on the outside. It is quite adequate to simply write the label on the exterior of a ziplock bag with a waterproof pen.

Fungi will reactivate and start to destroy pollen when the matrix is exposed to the air during excavation. If samples are to be kept for long periods, they should be dried at 90-100°C for 24 hours. This will remove all water, thereby impeding oxidization and eliminating fungal action. Samples that will be analyzed in a couple of months can simply be placed in a freezer.

6.4.3 Artifact Cataloguing Procedures

A provenience-based, lot cataloguing system will be used to inventory artifacts. Lot cataloguing is a method of inventorying artifacts of shared characteristics in groups or "lots." The method, which has been used by the authors since 1979, has time- and effort-saving advantages over describing the artifacts individually. Lots are established according to criteria developed by the appropriate specialists. Initially, artifacts are catalogued according to archaeological provenience and material. The catalogue number, which is marked on each object, is made up of two elements: the accession number and the provenience reference. Specialists divide materials into appropriate categories for presentation in their analyses. For interpretation and synthesis, the catalogue of historic period artifacts is reorganized according to the general function categories devised by S. South (1977) as modified and expanded for other researchers for later periods and western U.S. contexts (e.g., Hardesty 1988, Praetzelis and Praetzelis 1990b, Tordoff 1987). These categories include activities, domestic, indefinite, industrial, personal, storage, structural, and unidentified use. Prehistoric materials are also organized according to functional type and material. Artifacts that are catalogued in this way are stored according to material and provenience.

6.4.4 Artifact Analysis

Artifacts recovered from the SF-480 excavations will be analyzed with two goals in mind: to allow the investigators to address questions identified in the research design, and to generate comparative data for other researchers to use. The utility of the data to be obtained and the cost of analysis will be the determining factors in the decision to initiate a particular form of analysis. Furthermore, "the field operation may recover data that may not be fully analyzed" (48 FR 44736). For example, some pollen samples--which are expensive to analyze--may be collected, stabilized, and curated, but not analyzed.

The most common classes of artifacts found on prehistoric archaeological sites in central California are flaked stone tools and debitage, and ground/polished/pecked/battered stone. Debitage from each provenience will be grouped by material, and each group weighed and

counted. The various types of flakes--such as thinning flakes, core reduction percussion flakes, and flakes with cortex--will be noted in order to assess the types of lithic production being carried out on the site. Obsidian debitage will be visually sorted into origin sites and a sample analyzed using XRF to confirm the accuracy of the visual sourcing and to determine the pattern of obsidian procurement. Hydration rim readings will be taken from selected samples of obsidian. While absolute dates may not be forthcoming from obsidian studies, rim readings often allow archaeological sites that lack stylistically distinctive and temporally diagnostic artifacts to be divided into cultural components and to be dated relative to other sites.

The analysis of formed stone tools, particularly projectile points, has been the backbone of cultural-historical reconstruction in California prehistoric archaeology for many years. To facilitate this effort, formed tools will be analyzed as to their morphological and technological attributes--that is, point type, shape, fragment type, production technique, etc.--as well as their significant metrical characteristics. Stylistically distinctive obsidian tools that occur in association with samples that are suitable for radiocarbon dating would be particularly important as a way of calibrating the obsidian rim readings to allow absolute dating. Informal (e.g., edge-worked) flaked-stone tools and some classes of ground stone are analyzed in terms of their technology and their function in the subsistence system. Depending on the context of their discovery, grinding tools such as milling slabs may be subjected to pollen or micro-organic study of the grinding surface to determine the types of plant materials that were used on the site.

In historical archaeology, the "site" is often an artificial construct that consists of the totality of archaeological remains in a defined location, regardless of their period of deposition or historical association. Defined in this way, the "site" is meaningless as an analytical unit. Unless historical documentation or archaeological evidence indicates a single archaeological component, analysis of each excavation site will be geared toward the interpretation of individual proveniences or a number of proveniences that have demonstrable historical associations. Intra-site comparisons will be made between proveniences.

The enormous range of consumer goods available in late 19th-century San Francisco makes it impractical to specify the analytical procedures that may be carried out on all types of material that may occur. Rather, four of the most common classes will be described: ceramics, glass containers, buttons, and ferrous metal artifacts. In Section 4.8.1, Yentsch describes the analytical value of these and other classes of historic-period artifacts and ecofacts. The reader should consult Yentsch's work if more detail is desired. Although particularistic issues can be tackled by the examination of individual classes of artifacts, it is emphasized that many of the research questions identified in Section 4.7 require insights that are obtained from a synthesis using data from several classes.

Ceramics will be sorted and tabulated by functional type, fabric, form, decorative treatment, and, where possible, place of origin. The minimum number of items (MNI) represented will be calculated, as will the proportion of each type of the total class represented. Ceramic analysis can contribute to the determination of the date of deposition by using a variant on South's mean dating method that employs pieces that bear dated makers' marks. The relative cost of the collection may be estimated using price and availability data, such as G. Miller's (1980) economic scale. In the case of domestic table and decorative ceramics, the estimated dates of purchase and deposition may be used to estimate how the purchasers/users of the material responded to changes in taste and fashion, and their participation in certain culturally significant social rituals.

Glass will be sorted by functional category, color, and type. The definitions and methods developed by Parks Canada (Jones et al. 1985) will be employed. Design elements and makers' marks will also be noted. The material for each provenience will be described by vessel part, body form, possible function or contents, technological characteristics, size, and decorative detailing. The MNI will be calculated, as will the proportion of each type of the total class represented. Chronologically sensitive aspects of glassware, such as the use of the Rickett's mold or the automatic bottle-making machine, will be noted. The latter will be combined with ceramic and other artifact data to determine deposition dates. As with ceramics, the proportion of the various functional types of glassware in each provenience will be tabulated to help estimate the nature of the domestic or commercial entity that created the deposit.

Buttons will be sorted by size (in British lines and in inches), form, construction, and material type. Design elements and patent and makers' marks will also be noted. The latter marks provide useful information to help date archaeological deposits, while material, attachment type, form, and size are good indicators of garment type and function. Buttons may be associated with articles of gender- and age-specific clothing. The numbers and relative frequencies of button types can suggest site function.

Metal artifacts are often the most problematic archaeological finds since they are generally fragmentary, in poor condition, and bulky. These materials are sorted by function and material. It is anticipated that most will be of ferrous metal and a minority of copper alloy. Food containers ("tin cans") tend not to survive in urban archaeological contexts. Without this dimension, the chief interpretive value of metal artifacts tends to be in the determination of site function.

6.4.4.1 Analysis of Zooarchaeological Remains by Dwight Simons

Initially, all faunal remains from the various archaeological deposits will be divided into burned and unburned fractions. All pieces comprising both categories will be counted and weighed. Identifiable bones then will be segregated from unidentifiable specimens. Whenever possible, the former will be identified to class-order-family-genus species level. This will be accomplished using comparative osteological collections maintained by the Department of Ornithology and Mammalogy, California Academy of Sciences, San Francisco; the Laboratory of Archaeology, California State Department of Parks and Recreation, West Sacramento; and the Department of Biology, San Jose State University, San Jose.

Following identification, pertinent data will be recorded for each identified specimen. These will include (1) the specimen's taxonomic identity; (2) the specimen's skeletal element; (3) the side of the body or body segment from which it comes; (4) configuration (i.e., whole element, proximal portion, distal portion, and so forth); (5) whether the specimen was from an adult or juvenile individual; and (6) the weight of the specimen. Additional observations which will be recorded include signs of cultural modification, such as intentional breakage, presence of butchering marks, modification into an artifact, etc. If present, indications of non-cultural modifications, such as animal gnaw marks, weathering, and post-depositional breakage, also will be noted for each specimen. Measurements of identified specimens will be taken and recorded when appropriate to research goals.

After being recorded, these data will be tabulated and summarized. Skeletal element counts will be determined for each identified vertebrate taxon on the basis of the number of separately identifiable portions represented in each specimen. For example, a mandible with three associated teeth would be assigned an element count of four, since four separately identifiable portions are present. Calculations of MNI will be made by counting number(s) of the most abundant skeletal element(s) of each identified vertebrate taxon. Allometric computations and calculations of species diversity and selectivity indices will be made if and when these are appropriate.

The foregoing discussion suggests that all archaeofaunal assemblages resulting from the SF-480 project have the potential to possess a combination of characteristics making all of them important in some fashion in terms of their ability to address significant zooarchaeological concerns and questions. Depending upon the size and composition of these assemblages, the questions may be qualitatively or quantitatively based. All assemblages are deemed capable of providing significant data since they will comprise a larger set of zooarchaeological data

excavated and analyzed in an identical fashion. This insures a high degree of intra- and inter-deposit comparability, which, in turn, allows fairly rigorous monitoring of the similarities and differences existing through time and space between archaeofaunal assemblages.

Viewed in this fashion, zooarchaeological data from the SF-480 project have the potential to be compared in an amended form of a regional perspective both within and without project boundaries. In recent years, a regionally-based approach has been of considerable importance to prehistoric zooarchaeological studies conducted in northern California (e.g., Bayham and Broughton 1990; Broughton 1988; Hildebrandt 1984; Hildebrandt et al. 1984; Schulz 1981; Simons 1987; 1990a, 1990b; Simons and Quinn 1990), and also holds considerable promise for historic sites zooarchaeology in this region.

6.5 TREATMENT PLAN FOR BLACKSMITH SHOPS

As was described in the research design, the archaeology of blacksmithing has developed to the point that standardized investigation methods and goals are recognized. The proposed approach follows the research priorities and methods suggested by Light (1984) and Stewart et al. (1974).

The layout of a blacksmith shop will be investigated by examining metal-working waste in the form of filings produced at the vise station and scale created at the forge. It is predicted that soil from the "domestic" and storage areas of the shop will be relatively low in iron but should contain artifacts such as food remains and smoking pipe fragments. To confirm the plan of the blacksmith shop, the area will be gridded and sampled using hand magnets and a metal detector. After the basic layout has been determined, the soil will be systematically sampled every two feet (0.6 m) for later analysis, wherein the magnetic fraction of the soil will be determined by weight. This will provide an accurate picture of the shop's use areas which themselves will be sampled.

Light (1984:61) and Teague (1987:206) agree that forge waste is often the most revealing component of metal-working sites. The clinker that develops at the forge tuyere contains information on the type of metal being worked (e.g., wrought iron versus steel), the content of the forge bed (sand indicates a permanent forge, whereas portable forges have iron beds), and the material used to fuel the forge (coal, coke, or even locally-produced charcoal). Analysis of the clinker is dependent on two critical factors: the ability to obtain a sufficiently large sample of the material itself, and the availability of a historical metallurgist to perform the necessary tests and to interpret the results. The latter is a matter of concern, for the services of these individuals are

in great demand (John Light, personal communication, 1992), partly due to the innovative work of Henry Unglik (1990). Consequently, it may not be possible to perform the analysis before the final report is submitted.

Most emphasis will be placed on the excavation of the forge area to recover slag, and on the waste area to recover scrap and unrepairable artifacts. Large blacksmith-associated artifacts, whose research and interpretive potential can be realized by recording them in the field, will be reburied in their former locations.

6.6 TREATMENT PLAN FOR THE MAIN STREET WHARF

The Main Street Wharf was constructed in about 1853 and served the industrial works of Tar Flat until the late 1860s or early 1870s, when the filling of Blocks 1 and 2 was completed. The wharf, which historic photographs and drawings show was built using the pile method, was about 1,120 feet long by 100 feet wide. It took the form of two, parallel, 25-foot-wide wharves along the line of Main Street between Folsom and Mission, separated by a 50-foot-wide slip.

It is almost certain that when Main Street was graded as a thoroughfare in the early 1870s, the Main Street Wharf was simply buried in the fill. It is likely that a substantial portion of the Wharf still exists under several feet of fill both under First Street and on the extreme northeastern edge of Blocks 1 and 2.

If it retains integrity, it is likely that the Main Street Wharf is eligible to NRHP under criterion A under the theme "San Francisco Infrastructure, 1853-1870." Features such as the Main Street Wharf were essential components of the city's infrastructure that supported industry and commerce. No similar wharf is known to survive in San Francisco although the nearby Beale Street Wharf would have similar characteristics if it still exists. As discussed in the previous chapter, although archaeologists have investigated the construction techniques employed on wharves elsewhere in the United States (Norman 1987), this does not appear to be an "important" research question in the present instance, since the Main Street Wharf's structure is clear from the historic record. For this reason, the Wharf does not appear to be NRHP-eligible under criterion D.

Although neither the location nor the condition of this feature has been confirmed archaeologically, parts of six proposed footings, totalling a maximum of 1,200 square feet, may encounter the Main Street Wharf.

Principle 6 of the Advisory Council's *Treatment of Archaeological Properties* discusses the option of disturbing or destroying archaeological properties without data recovery: "If the data contained in the property can be used to address valuable research questions, the data should be

recovered. If the data cannot be so used, data recovery is an inappropriate use of public funds and should not be undertaken" (ACHP 1990:5). The decision to undertake data recovery is predicated on the property containing important information, and therefore being eligible to NRHP under criterion D. The Main Street Wharf does **not** appear to be such a property. While, in the opinion of the writers, the Wharf is an important historical structure, its significance does not derive from its information potential, making data recovery inappropriate. In addition, the SF-480 project's effects on the Wharf will be quite small in relation to the total extent of this large feature. It is estimated that the Wharf structure covers an area of 56,000 square feet; of this, a maximum of 1,200 square feet may be disturbed by the project. Finally, the remains of the Wharf are likely buried under 12 feet of fill, below the water table, and may be contaminated by hazardous wastes. Thus, the potential logistical problems that would be encountered and the expense involved in uncovering the Wharf are not believed to be worthwhile, considering the value of that data that could be obtained. For these reasons, no data recovery is proposed for the Main Street Wharf.

6.7 TREATMENT OF HUMAN REMAINS AND ASSOCIATED SACRED ITEMS

CALTRANS will ensure that the treatment of human remains, both Native American and non-Native American, will comply with all applicable State and Federal laws and regulations. In all cases where human remains are discovered, the Field Director will immediately notify CALTRANS who will in turn inform the County Coroner and, in the case of Native American remains, the California State Native American Heritage Commission. If human remains are discovered during demolition or construction, all work will cease in the immediate vicinity of the discovery until the required studies have been completed.

6.8 TREATMENT OF HISTORIC PROPERTIES DISCOVERED DURING CONSTRUCTION

Although the Testing Plan has attempted to provide for the identification and examination of the most archaeologically sensitive locations within the APE, the paved and filled condition of the study area make it likely that NRHP-eligible properties will be uncovered in the course of construction.

To recognize and appropriately treat unexpected discoveries, a qualified archaeologist shall monitor all project activities that may affect such properties. If archaeological properties are discovered, all ground-disturbing activities in the vicinity of the find will cease until the find has

been evaluated. If the phenomenon appears to be NRHP-eligible, CALTRANS will "assume the property to be eligible for the purposes of [compliance with] Section 106" (36 CFR 800.11 [d][1]). If data recovery is determined by CALTRANS and the archaeological consultant to be appropriate, this will be accomplished with dispatch so that construction is not unnecessarily delayed.

6.9 OWNERSHIP AND CURATION OF ARCHAEOLOGICAL MATERIALS

All archaeological material shall remain the property of CALTRANS. However, upon the completion of the final report on the archaeological investigations, the collection will be transferred to an appropriate facility for permanent curation where it will be available for study by researchers in the future. This facility will meet the standards set forth in *Curation of Federally Owned and Administered Archaeological Collections* (36 CFR 79). In addition to the artifacts, soil samples, etc., the facility will also receive copies of field notes and drawings, special studies, and the final report. The designated repository for the San Francisco Bay Area is the Archaeological Collections Facility at Sonoma State University.

6.10 REPORT AND DISSEMINATION OF RESULTS

At the conclusion of data recovery or other treatment on each project block, the consultant will submit a brief progress report to CALTRANS. The report will summarize the archaeological activities undertaken on the block in order to document that all known, potentially NRHP-eligible properties that will be affected by the project have been treated according to this Treatment Plan.

When all field work is concluded, the consultant will prepare a comprehensive technical report that will describe the archaeological project's goals and methods, and present its findings and interpretations. The report will synthesize the important archaeological data recovered through excavation with the information from archival research in order to address the questions identified in the research design. Depending on the nature of the findings, it may be appropriate to produce several, stand-alone reports on particular topics that reflect the various components of the research design. Past experience has shown that this format enhances the circulation and availability of these technical reports. The final report(s) will include the following elements:

- Executive summary
- Statement of scope
- Project location and setting
- Previous research summary
- Research goals and the strategies that guided research, testing, and data recovery
- Field and lab methods
- Archival research
- Archaeological context
- Findings--site/feature content, structure, and historical/cultural associations
- Artifact descriptions
- Consideration of research problems and questions
- Conclusions
- References cited
- Appendices: reports of technical analyses

Copies of the final report(s) will be provided to the Advisory Council, CALTRANS, FHWA, SHPO, the Northwest Information Center of the California Archaeological Inventory, public libraries, research libraries, and other interested parties. In addition, it is anticipated that articles will be prepared for publication in professional and lay journals that will address the findings of the archaeological and historical components of the SF-480 project.

Standard IV of the Secretary of the Interior's *Standards for Archaeological Documentation* states that "The results of archaeological Documentation are reported and made available to the public" (48 FR 44734). At the discretion of FHWA and CALTRANS, materials may be prepared to present the results of the archaeological and historical studies to the general public.

REFERENCES CITED

Maps

Bancroft, Hubert Howe

- 1865 Commercial Map of San Francisco. Ms. map on file, Bancroft Library, University of California, Berkeley.

Harrison, Captain Augustus

- 1848 Map of Yerba Buena in September, 1848. Copy of ms. map on file, J. Porter Shaw Library, National Maritime Historic Park, San Francisco.

Hendry, G. W. and J. N. Bowman

- 1940b Map of the Presidio, San Francisco 1776 to 1840's. Map on file, Bancroft Library, University of California, Berkeley.
1940c Tracing of drafted map of Yerba Buena 1835 to 1847. Map on file, Bancroft Library, University of California, Berkeley.
1940d Map of the O'Farrell Swing Early 1847 (Montgomery to Stockton, California to Pacific Streets). Map on file, Bancroft Library, University of California, Berkeley.

Hicks-Judd and Company

- 1894 Handy Block Books. Block maps Indicating Land Ownership. Hicks-Judd and Company, San Francisco. Insurance Adjustors
1907 Part of San Francisco showing the area destroyed by fire, April 18-21, 1906. From Gerstle Mack papers. Map Library, Main Library, University of California, Berkeley.

Sanborn Map Company

- 1887 San Francisco, California. Microfilm. Map Room, Main Library, University of California, Berkeley.
1899 San Francisco, California. Microfilm. Map Room, Main Library, University of California, Berkeley.
1913 (Updated 1929). San Francisco, California. Microfilm. Map Room, Main Library, University of California, Berkeley.
1913 (Updated 1948). San Francisco, California. Microfilm. Map Room, Main Library, University of California, Berkeley.

San Francisco, City and County

- 1985 Map of the City and County of San Francisco (including Assessor's Block numbers). Prepared by Frank H. Moss Jr., City Engineer. Department of Public Works, Bureau of Engineering, City and County of San Francisco.

U.S. Coast Survey

- 1852 City of San Francisco & Vicinity, California. Survey completed in February, 1852. Ms. Map.
1853 City of San Francisco & Vicinity, California. Survey completed in 1852 and published 1853. Scale 1/10,000.

- 1857 City of San Francisco & Its Vicinity, California. A. D. Bache Superintendent. Surveyed by A. F. Rogers, Sub-assistant. Scale 1/10,000.
1859 City of San Francisco & Its Vicinity, California. Topography completed in 1857-58, hydrography completed 1857, published in 1859. Scale 1/10,000.
1869 San Francisco Peninsula. Survey completed in 1868. Scale 1/10,000.
1884 San Francisco Peninsula. Survey completed in 1883. Scale 1/10,000.

United States Geological Survey (USGS)

- 1899 *San Francisco, California, Quadrangle Map*. 15 minute series. U.S. Geological Survey, Washington, D.C.
1915 *San Francisco, California, Quadrangle Map*. 15 minute series. U.S. Geological Survey, Washington, D.C.
1956 *San Francisco, North California, Quadrangle Map*. 7.5 minute series. Photo-revised 1968 and 1973 U.S. Geological Survey, Washington, D.C.

Zakreski, M.

- 1853 The Only Correct & Fully Complete Map of San Francisco, Compiled from Original Surveys ... Respectfully Dedicated to the City Authorities.

Written Sources

Adams, William H.

- 1977 *Silcott, Washington: Ethnoarchaeology of a Rural American Community*. Report of Investigations 54. Laboratory of Anthropology, Washington State University, Pullman.

Advisory Council on Historic Preservation

- 1990 *Treatment of Archaeological Properties: A Handbook*. U.S. Government Printing Office, Washington, D.C.

Ainley, David G, and T. James Lewis

- 1974 The History of Farallon Island Marine Bird Populations, 1854-1972. *Condor* 76:432-446.

Aker, Raymond

- 1992 Letter Report regarding four gold rush vessels to Nancy Olmsted, Resource Consultants, Kentfield, California.

Albee, A., and C. Willer

- 1976 *Archaeological Survey of the Proposed Southwest Outfall and Southwest Water Pollution Control Plant*. Prepared for the Department of Public Works, City and County of San Francisco.

Alta California

- 1850 *Alta California*, 26 December 1850.
- 1851 *Alta California*, 25 June 1851.
- 1852 List of Storeships *Alta California*, 31 July 1852. Reprinted in *Reminiscences*, 22 May 1882 (as cited in Archeo-Tec 1991a).
- 1864 *Alta California*, 4 May 1864.
- 1882 *Alta California*, 29 May 1882.

Ambro, Richard D.

- 1988 *343 Sansome Street Project, Pre-Construction Archaeological Testing Program*. Ms. on file, S-12505, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1990 *Report on Archival Research of Cultural Resources for the Proposed Facilities Expansion Project at the California Palace of the Legion of Honor, Lincoln Park, San Francisco, California*. Ms. on file, S-12505, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Anonymous

- n.d. Archaeological Site Record for CA-SFR-2. Ms. on file, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.
- 1854 Article on Rincon Point Chinese Fishing Village. *Chamber's Journal* (as cited in Pastron and Hattori 1990).
- 1889a *Industries of San Francisco*. Bancroft Library, University of California, Berkeley.
- 1889b *San Francisco, Its Commerce and Industries*. Bancroft Library, University of California, Berkeley.
- 1904 The Bay of San Francisco, vols. 1-2. Ms on file, Pamphlet File, Bancroft Library, University of California, Berkeley.
- 1940 History of the Kindergarten Movement in the Western States. Paper presented at the 47th Annual Convention of the Association for Childhood Education.

Archeo-Tec

- n.d.a. *Historical Archaeology at the Yerba Buena Center, San Francisco, California*. Ms. on file, Archeo-Tec Inc., Oakland (as cited in Pastron and Hattori 1990).
- n.d.b. *The Archaeology of 505 Montgomery Street, San Francisco, California (CA-SFR-117H)*. Ms. on file, Archeo-Tec Inc., Oakland (as cited in Pastron and Hattori 1990).
- 1985a *Rincon Point-South Beach. Report on Historical Cultural Resources*. Ms. on file, San Francisco Redevelopment Agency, San Francisco.
- 1985b *Cultural Resources Evaluation: Embarcadero Center West, San Francisco, California*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and S-9339, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

- 1985c *Cultural Resources Evaluation of 49 Stevenson Street, San Francisco, California*. (Letter Report). Ms. on file, S-9330, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986a *Embarcadero West Pre-Construction Archaeological Testing Program*. Prepared for Embarcadero West Development, San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1986b *The Archaeology of 100 First Plaza, San Francisco*. Prepared for Barker Interests Limited, San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and S-8272, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986c *Cultural Resources Evaluation of the 299 Second Street Office Building, San Francisco, California*. Ms. on file, S-9324, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986d *Cultural Resources Evaluation of 222 Second Street, San Francisco, California*. Ms. on file, S-9325, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986e *Cultural Resources Evaluation of 91 Drumm Street, San Francisco, California*. Ms. on file, S-9321, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986f *Rincon Annex Post Office Pre-Construction Archaeological Testing Program*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and S-9322, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986g *Cultural Resources Evaluation of 200 California Street, San Francisco, California*. Ms. on file, S-9237, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1987a *200 California Street Archaeological Testing Program*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1987b *Hills Plaza: Pre-Construction Archaeological Testing Program*. Ms. on file, S-9428, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1987c *Hills Plaza: Archaeological Data Recovery Program*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1987d *Cultural Resources Evaluation of 135 Main Street, San Francisco, California*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.

- 1987e *Pan Magna Plaza: Pre-Construction Archaeological Testing Program*. Ms. on file, S-11463, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1988a *Cultural Resource Evaluation of the Sacramento/Front - California/Front Project* (sic; Davis), San Francisco. Ms. on file, Office of Environmental Review, Department of Planning, San Francisco.
- 1988b *Historical Archaeology at the Rincon Center, San Francisco, California*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1988c *Moscone Convention Center Expansion Project: Pre-Construction Archaeological Testing Program (CA-SFR-114)*. Prepared for Sam Liu. Ms. on file, Office of the Chief Administrative Officer, San Francisco, and Office of Environmental Review, City and County of San Francisco Planning Department, San Francisco.
- 1989a *Archaeological Investigations at 235 Pine Street, San Francisco, California*. Prepared for Mr. Charles Saunders, London and Edinburgh Trust. Ms. on file, S-11460, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1989 *Archaeological Archival Report Embarcadero Roadway Project* (Draft). Prepared for Bechtel Environmental, Inc., San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1990a *222 Second Street, San Francisco, California: Pre-Construction Archaeological Testing Program*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1990b *Moscone Convention Center Expansion Project: Archaeological Data Recovery Program (CA-SFR-114)*. Prepared for Mr. John Cribbs, Project Manager. Ms. on file, Office of the Chief Administrative Officer, San Francisco.
- 1991a *Archival Cultural Resources Evaluation of the Proposed One Union Street Development Project, San Francisco (Union, Commercial, Battery and Front Streets)*. Prepared for Environmental Science Associates, San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1991b *222 Second Street, San Francisco, California: Pre-Construction Archaeological Testing Program*. Prepared for Sepulveda Properties, San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- Armentrout-Ma, L. Eve
- 1979 *Chinese and GGNRA (Golden Gate National Recreation Area), 1849-1949: Guests of Choice, Guests of Necessity*. Ms. on file, United States Department of the Interior, National Park Service, Interagency Resources Division, National Register Programs, San Francisco.
- 1981 *Chinese in California's Fishing Industry, 1850-1941. California History: The Magazine of the California Historical Society* 60(2):142-157.
- Atwater, B. F., C. W. Hedel, and E. J. Helley
- 1977 *Late Quaternary Depositional History, Holocene Sea-Level Changes, a Vertical Crustal Movement, Southern San Francisco Bay, California*. U.S. Geological Survey Professional Paper 1014. Washington, D.C.
- Averbach, Alvin
- 1973 *San Francisco's South of Market District, 1850-1950: The Emergence of Skid Row. California Historical Society Quarterly* 52:197-218.
- Averbuch, Bernard
- 1974 *National Register of Historic Places Registration Form for Lotta Crabtree Fountain (CA-SFR-46H)*. Ms. on file, S-3197, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Axelrod, D. L.
- 1967 *Evolution of the Californian Closed Cone Pine Forest. Proceedings of the Symposium on the Biology of the California Islands*:93-149. Santa Barbara Botanic Garden, Santa Barbara, California.
- Ayres, James, and L. Stone
- 1976 *A General Plan for the Management of Cultural Resources within the North Shore Outfalls, North Point Pump Station, and Channel Outfalls Project, San Francisco, California*. Prepared for the National Park Service (as cited in Pastron, Prichett, and Ziebarth 1981).
- Bailey, E. H., W. P. Irwin, and D. L. Jones
- 1964 *Franciscan and Related Rocks, and their Significance in the Geology of Western California. California Division of Mines and Geology Bulletin* 183. Sacramento.
- Baker, S.
- 1978 *Report on the Fort Mason Archaeological Test Excavations*. Prepared by Archaeological Consultants, San Francisco. Submitted to the United States Department of the Interior, National Park Service, San Francisco, California. Ms. on file, S-3179, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.
- Baker, S., L. Horvath, and A. Carlson
- 1978a *Archaeological Site Record for CA-SFR-29*. Ms. on file, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.

- 1978b Archaeological Site Record for CA-SFR-30. Ms. on file, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.
- 1978c Archaeological Site Record for CA-SFR-31. Ms. on file, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.
- Baker, Vernon G.
1980 Archaeological Visibility of Afro-American Culture: An Example from Black Lucy's Garden, Andover Massachusetts. In *Archaeological Perspectives on Ethnicity in America: Afro-American and Asian American Culture History*, edited by Robert L. Schuyler, pp. 29-37. Baywood, Farmingdale, New York.
- Baker, William
1980 *The Niantic Observed*. *Sea History* 15:46.
- Bakker, E.
1971 *An Island Called California*. University of California Press, Berkeley.
- Bancroft, Hubert Howe
n.d. Bancroft Scraps. Notebooks of clippings. Ms. on file, Bancroft Library, University of California, Berkeley.
1884-1890a *History of California*. 7 vols. A. L. Bancroft, San Francisco.
1884-1890b *History of California*. Vol. II. 1801-1824. A. L. Bancroft, San Francisco.
1884-1890c *History of California*. Vol. III. 1825-1840. A. L. Bancroft, San Francisco.
1884-1890d *History of California*. Vol. VI. 1848-1859. A. L. Bancroft, San Francisco.
1884-1890e *History of California*. Vol. VII. 1860-1890. A. L. Bancroft, San Francisco.
- Banks, Peter
1985 Archaeological Site Record Supplement for CA-SFR-7 (Nelson #387; Crocker or Bayshore Mound). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Barber, Michael
1976 The Vertebrate Fauna from a Late Eighteenth Century Well: The Bray Plantation, Kingsmill, Virginia. *Historical Archaeology* 10:68-72.
- Barth, Gunther
1975 *Instant Cities: Urbanization and the Rise of San Francisco and Denver*. Oxford University Press, New York.
- Basin Research Associates
1992 Letter to Adrian Praetzellis, dated 6 January 1992, from Colin I. Busby, principal for Basin Research Associates, regarding archaeological monitoring of the demolition of possible brick pipelines exposed during test boring, part of the SF-480 terminal separation rebuild project.
- Bauman, Sister Mary Beata
1958 *A Way of Mercy, Catherine McAuley's Contribution to Nursing*. Vantage Press, New York.
- Bayham, Frank E.
1979 Factors Influencing the Archaic Pattern of Animal Exploitation. *Kiva* 44:219-235.
- Bayham, Frank E., and Jack Broughton
1990 Animal Utilization in the North Sacramento Valley. In *Archaeological Investigations at CA-GLE-105: A Multi-Component Site Along the Sacramento River, Glenn County, California*, edited by F. E. Bayham and K. L. Johnson, pp. 129-157. Archaeological Research Program, California State University, Chico, California.
- Beardsley, R. K.
1948 Cultural Sequences in Central California Archaeology. *American Antiquity* 14:1-28.
1954 *Temporal and Areal Relationships in Central California Archaeology*. University of California Archaeological Survey Reports Nos. 24 and 25. Berkeley.
- Beaudry, Mary C.
1986 The Archaeology of Historical Land Use in Massachusetts. *Historical Archaeology* 20(2):38-46.
- Beaudry, Mary C., Lauren J. Cook, and Stephen A. Mrozowski
1991 Artifacts and Active Voices: Material Culture as Social Discourse. In *The Archaeology of Social Inequality*, edited by Robert Paynter and Randall H. McGuire, pp. 150-191. Basil Blackwell, Oxford.
- Beaudry, Mary C., and Stephen Mrozowski
1989 Archeology in the Backlots of Boott Units 45 and 48: Household Archaeology with a Difference. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. III. *The Lowell Boarding House System as a Way of Life*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 49-82. Cultural Resource Management Study No. 21. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

- Beaudry, Mary C., and Stephen A. Mrozowski (Editors)
- 1987 *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. I. *Life at the Boarding House*, Cultural Resource Management Study No. 18. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.
- 1989 *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. III. *The Lowell Boarding House System as a Way of Life*, Cultural Resource Management Study No. 21. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.
- Beechey, Frederick William
- 1841 *Narrative of a Voyage to the Pacific and Bering's Strait in the Years 1825, 1826, 1827, and 1828*. Coburn and Bentley, London.
- Behrensmeyer, Anna K.
- 1984 Taphonomy and the Fossil Record. *American Scientist* 72:558-566.
- Behrensmeyer, Anna K., and Susan M. Kidwell
- 1984 Taphonomy's Contributions to Paleobiology. *Paleobiology* 11:105-119.
- Bertrand Laboratory
- 1978 *Professional Evaluation of Niantic Recovery (CA-SFR-81H)*. Ms. on file, S-3227, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Bickle, Polly McW.
- 1978a Changing Sea Levels along the California Coast: Anthropological Implications. *The Journal of California Anthropology* 5(1):6-20.
- 1978b Corrections to Sea Level Article. *The Journal of California Anthropology* 5(2):296-297.
- Binford, Lewis R.
- 1989 Response to Turner. *Journal of Archaeological Science* 16:13-16.
- Binford, Lewis R., M. G. L. Mills, and Nancy M. Stone
- 1988 Hyena Scavenging Behavior and Its Implications for the Interpretation of Faunal Assemblages from FLK 22 (The Zinj Floor) at Olduvai Gorge. *Journal of Anthropological Archaeology* 7:99-135.
- Blanford, John
- 1987 Overseas Chinese Ethnicity and Euroamerican Glass Bottles at the Wong Ho Leun Site. In *Wong Ho Leun: An American Chinatown*, edited by Great Basin Foundation, pp. 189-233. Great Basin Foundation, Center for Anthropological Research, San Diego, California.
- Blumenschine, Robert J.
- 1988 An Experimental Model of the Timing of Hominid and Carnivore Influence on Archaeological Bone Assemblages. *Journal of Archaeological Science* 15:483-502.
- 1989 A Landscape Taphonomic Model of the Scale of Prehistoric Scavenging Opportunities. *Journal of Human Evolution* 18:345-371.
- Bobrowsky, Peter T.
- 1982 An Examination of Casteel's MNI Behavior Analysis: A Reductionist Approach. *Midcontinental Journal of Archaeology* 7:171-184.
- Bond, Kathleen A.
- 1989 The Medicine, Alcohol, and Soda Vessels from the Boott Mills. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. III, *The Lowell Boarding House System as a Way of Life*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 121-140. Cultural Resource Management Study No. 21. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.
- Bonnichsen, Robson, and Marcella H. Sorg (Editors)
- 1989 *Bone Modification: Proceedings of the First Bone Modification Conference*. Center for the Study of the First Americans, Orono, Maine.
- Bostwick, John A.
- 1980 The Plaza II Site Excavation of a Colonial Spanish Well in St. Augustine, Florida. *Historical Archaeology* 14:73-82.
- Bowen, Joanne
- 1975 Probate Inventories: An Evaluation from the Perspective of Zooarchaeology and Agricultural History at Mott Farm. *Historical Archaeology* 9:11-25.
- 1992 Faunal Remains and Northeast Urban Household Subsistence. In *The Art and Mystery of Historical Archaeology: Essays in Honor of James Deetz*, edited by Anne Yentsch and Mary C. Beaudry, pp. 267-280. CRC Press, Boca Raton, Florida.
- Bradley, James, Neill DePaoli, Nancy Seasholes, Patricia McDowell, Gerald Kelso, and Johanna Schoss
- 1983 *Archaeology of the Boston Hotel Site*. Occasional Papers in Archaeology and History No. 2. Massachusetts Historical Commission, Massachusetts.
- Brady, Mary Jane, and Merrill Wilson
- 1982 *Historic Structure Report, Derby Wharf, Architectural Data*. National Park Service, Denver.

- Branstner, Mark C., and Terrance J. Martin
1987 Working-Class Detroit: Late Victorian Consumer Choices and Status. In *Consumer Choice in Historical Archaeology*, edited by Suzanne M. Spencer-Wood, pp. 301-320. Plenum Press, New York.
- Braun, D. P.
1974 Explanatory Models for the Evolution of Coastal Adaptation in Prehistoric Eastern New England. *American Antiquity* 39:582-596.
- Breeze, Evelyn
1935 Ms. typescript at California Historical Society, San Francisco.
- Breschini, Gary S., and Trudy Haversat
1977 *Report on the Pre-Construction Archaeological Testing Program Conducted within the C-2 Contract Area of the Channel Outfalls Consolidation Project*. Ms. on file, S-4879, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Broughton, Jack M.
1988 *Archaeological Patterns of Prehistoric Fish Exploitation in the Sacramento Valley*. Unpublished Master's thesis, Department of Anthropology, California State University, Chico, California.
- Brown, Ann R.
1982 *Historic Ceramic Typology with Principal Dates of Manufacture and Descriptive Characteristics for Identification*. Archeology Series No. 15. Delaware Department of Transportation, Division of Highways, Location and Environmental Studies Office, Wilmington, Delaware.
- Brown, Gregory
1989 *The Faunal Remains from the John Draper Well: An Investigation in Historic Period Zooarchaeology*. Unpublished Master's thesis, Department of Anthropology, San Francisco State University, San Francisco.
- Brown, Marley R., III
1980 Urban Archaeology and the Regulatory Context. In *Historical Archaeology at the Golden Eagle Site*, edited by Mary Praetzellis, Adrian Praetzellis, and Marley R. Brown, III, pp. 32-39. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park.
- Brown, Sharon A.
1989 *Historic Building Survey: Cambria Iron Company*. National Park Service, Washington, D.C.
- Bryan, Ann E.
1890 The Letter Killeth. *Journal of Proceedings and Addresses of the National Education Association*.
- Bullen, Isabel
1978 *Preliminary Report of an Excavation on the Gold Rush Ship Niantic*. Ms. on file, S-3226, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Bunn, Henry T., Laurence E. Bartram, and Ellen M. Kroll
1988 Variability in Bone Assemblage Formation from Hadza Hunting, Scavenging, and Carcass Processing. *Journal of Anthropological Archaeology* 7:412-457.
- Burchell, R. A.
1980 *The San Francisco Irish, 1848-1880*. University of California Press, Berkeley.
- Burke, C. A.
1982 *From Potter to Spoilheap: Temporal Ranges and Popularity of 19th Century Ceramics*. Ms. on file, Parks Canada, Ontario Regional Office, Cornwall, Ontario.
- Butler, Brenda J.
1979 *Archeology of the Cothrin Building, Old Sacramento, California*. Ms. on file, California Department of Parks and Recreation, Cultural Resources Management Unit, Sacramento.
- Camp, C. L.
1942 Ichthyosaur Rostra from Central California. *Journal of Paleontology* 16(3):362-371.
- Cardwell, Kenneth H.
n.d. *Historical Report, U.S. Customs House, U.S. Post Office and Court of Appeals, San Francisco, California (CA-SFR-54H)*. Ms. on file, S-12239, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Carson, Cary, Norman F. Barka, William M. Kelso, Garry W. Stone, and Dell Upton.
1981 Impermanent Architecture in the Southern American Colonies. *Winterthur Portfolio* 16:135-196.
- Chambliss, William H.
1895 *Chambliss' Diary: or Society as It Really Is*. Chambliss, New York.
- Chaplin, Raymond E.
1971 *The Study of Animal Bones from Archaeological Sites*. Seminar Press, London, England.

Chavez, David

- 1979 *Preliminary Cultural Resources Evaluations of the Richmond Transport Sewer Alternatives, San Francisco Wastewater Management Program, San Francisco, California (Phase I)*. Prepared for Woodward-Clyde Consultants, Three Embarcadero Center, San Francisco. Ms. on file, S-4867, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.

Chavez, David, and Laurence Shoup

- 1983 *Archaeological Resources Evaluation for the I-280 Transfer Concept Program EIS/EIR, San Francisco*. Ms. on file, S-5940, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Cheek, Charles D., and Amy Friedlander

- 1990 Pottery and Pig's Feet: Space, Ethnicity, and Neighborhood in Washington, D.C., 1880-1940. *Historical Archaeology* 24(1):34-60.

Chinn, Thomas W., Him Mark Lai, and Philip Choy (Editors)

- 1969 *A History of the Chinese in California: A Syllabus*. Chinese Historical Society, San Francisco.

Christian, R.

- 1977 National Register of Historic Places Registration Form for the "Bank of Italy Building" (CA-SFR-43H). Ms. on file, E-22/S-3195, California Archaeological Site Inventory, Rohnert Park (As cited in NWIC bibliographic printout.)

Clonts, John E.

- 1983 Some Long Overdue Thoughts on Faunal Analysis. In *Forgotten Places and Things: Archaeological Perspectives on American History*, compiled and edited by Albert E. Ward, pp. 349-354. Contributions to Anthropological Studies No. 3. Center for Anthropological Studies, Albuquerque.

Cohen, Lizabeth A.

- 1986 Embellishing a Life of Labor: An Interpretation of the Material Culture of American Working-Class Homes, 1885-1915. In *Common Places. Readings in American Vernacular Architecture*, edited by Dell Upton and John Michael Vlach, pp. 261-278. The University of Georgia Press, Athens, Georgia.

Colley, Sarah M.

- 1990 The Analysis and Interpretation of Archaeological Fish Remains. In *Archaeological Method and Theory*, Vol. 2, edited by Michael B. Schiffer, pp. 207-253. University of Arizona Press, Tucson, Arizona.

Collins, Donna

- 1987a Emerging Archaeological Evidence of the Chinese Market Fisheries of Early California. *Pacific Coast Archaeological Society Quarterly* 23(2):63-68.
- 1987b Tradition and Network: Interpreting the Fish Remains from Riverside's Chinatown. In *Wong Ho Leun: An American Chinatown*, Vol. 2, *Archaeology*, edited by Great Basin Foundation, pp. 121-132. Great Basin Foundation, Center for Anthropological Research, San Diego, California.

Colville, Samuel

- 1856 *Colville's Sacramento Directory, Volume VI, for the Year Commencing May, 1856*. Monson, Valentine & Co., San Francisco.

Cook, Lauren J.

- 1989 Tobacco-Related Material and the Construction of Working-Class Culture. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. III. *The Lowell Boarding House System as a Way of Life*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 209-230. Cultural Resource Management Study No. 21. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

Cook, Sherburne F.

- 1943a The Conflict Between the California Indian and White Civilization, I: The Indian Versus the Spanish Mission. *Ibero-Americana* 21. Berkeley.
- 1943b The Conflict Between the California Indian and White Civilization, II: The Physical and Demographic Reaction of the Non-mission Indian in Colonial and Provincial California. *Ibero-Americana* 22. Berkeley.
- 1943c The Conflict Between the California Indian and White Civilization, III: The American Invasion. *Ibero-Americana* 23. Berkeley.
- 1950 *Physical Analysis as a Method for Investigating Prehistoric Habitation Sites*. Reports of the University of California Archaeological Survey. No. 7. Department of Anthropology, University of California, Berkeley.
- 1961 The Aboriginal Population of the North Coast of California. *Anthropological Records* 16(3).
- 1976 *The Conflict Between the California Indian and White Civilization: I*. Reprint. University of California Press, Berkeley. Originally published 1943, *Ibero-Americana* 21. Berkeley.

Cooper, J.

- 1979a Archaeological Site Record for CA-SFR-43H (Bank of Italy). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

- 1979b Archaeological Site Record for CA-SFR-44H (Pacific Gas and Electric Company Substation "C" on Jessie Street). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979c Archaeological Site Record for CA-SFR-46H (Lotta's Fountain). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979d Archaeological Site Record for CA-SFR-47H (former International Hotel). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979e Archaeological Site Record for CA-SFR-49H (Hallidie Building). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979f Archaeological Site Record for CA-SFR-51H (Fitzhugh Building). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979g Archaeological Site Record for CA-SFR-52H (Jackson Square Historic District). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979h Archaeological Site Record for CA-SFR-54H (United States Custom House). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979i Archaeological Site Record for CA-SFR-55H (Union Ferry Depot Building or Ferry Building). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979j Archaeological Site Record for CA-SFR-61H (Ferry Station Post Office Building). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979k Archaeological Site Record for CA-SFR-62H (former City of Paris Building). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979l Archaeological Site Record for CA-SFR-83H (San Francisco Civic Center). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979m Archaeological Site Record for CA-SFR-85H (Geary Theatre). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979n Archaeological Site Record for CA-SFR-88H (Audiffred Building). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979o Archaeological Site Record for CA-SFR-90H (17-55 Ohio Street or 17-55 Osgood Street). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Corbett, Michael R.
- 1974 National Register of Historic Places Registration Form for Jessie Street Substation, Substation C (CA-SFR-44H). Ms. on file, S-5350, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1976 National Register of Historic Places Registration Form for San Francisco Civic Center (CA-SFR-83H). Ms. on file, S-3217, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1979 *Splendid Survivors: San Francisco's Downtown Architectural Heritage*. Prepared by Charles Hall & Associates, Inc. for The Foundations for San Francisco's Architectural Heritage.
- Corran, W. H. L.
- 1885 *Langley's San Francisco Directory for the Year Commencing April, 1885*. Francis, Valentine, San Francisco.
- 1886 *Langley's San Francisco Directory for the Year Commencing April, 1886*. Francis, Valentine, San Francisco.
- 1887 *Langley's San Francisco Directory for the Year Commencing April, 1887*. Francis, Valentine, San Francisco.
- 1888 *Langley's San Francisco Directory for the Year Commencing April, 1888*. Francis, Valentine, San Francisco.
- Costello, Julia G.
- 1988 *Archaeological and Historical Studies at the Chew Kee Store, Fiddletown*. Foothill Resources Associates, Mokelumne Hill, California.
- Costello, Julia G., and Mary L. Maniery
- 1988 *Rice Bowls in the Delta: Artifacts Recovered from the 1916 Asian Community of Walnut Grove, California*. Occasional Paper 16, Institute of Archaeology, University of California, Los Angeles.
- Council, R. Bruce, Elizabeth Will, and Nicholas Honerkamp
- 1982 *Bluff Furnace: Archaeology of a Nineteenth Century Blast Furnace*. Jeffrey R. Brown Institute of Archaeology, University of Tennessee, Chattanooga, Tennessee.
- Crabtree, Pam J.
- 1985 Historic Zooarchaeology: Some Methodological Considerations. *Historical Archaeology* 19(1):76-78.
- 1984 Historic Mammal Remains from Providence Cove Lands (RI-935), Rhode Island. *MASCA Journal* 3(1):13-16.

- 1990 Zooarchaeology and Complex Societies: Some Uses of Faunal Analysis for the Study of Trade, Social Status, and Ethnicity. In *Archaeological Method and Theory*, Vol. 2, edited by Michael B. Schiffer, pp. 155-205. University of Arizona Press, Tucson, Arizona.
- Crader, Diana C.
- 1984 The Zooarchaeology of the Storehouse and the Dry Well at Monticello. *American Antiquity* 49:542-558.
- 1990 Slave Diet at Monticello. *American Antiquity* 55:690-717.
- Crocker, H. S., Company
- 1896 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1896*. H. S. Crocker, San Francisco.
- 1897 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1897*. H. S. Crocker, San Francisco.
- 1898 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1898*. H. S. Crocker, San Francisco.
- 1899 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1899*. H. S. Crocker, San Francisco.
- 1900 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1900*. H. S. Crocker, San Francisco.
- 1901 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1901*. H. S. Crocker, San Francisco.
- 1902 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1902*. H. S. Crocker, San Francisco.
- 1903 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1903*. H. S. Crocker, San Francisco.
- 1904 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1904*. H. S. Crocker, San Francisco.
- 1905 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1905*. H. S. Crocker, San Francisco.
- 1906 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1906*. H. S. Crocker, San Francisco.
- 1907 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1907*. H. S. Crocker, San Francisco.
- 1908 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1908*. H. S. Crocker, San Francisco.
- 1909 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1909*. H. S. Crocker, San Francisco.
- 1910 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1910*. H. S. Crocker, San Francisco.
- 1911 *Crocker-Langley San Francisco Directory for the Year Commencing April, 1911*. H. S. Crocker, San Francisco.
- Crossley, David
- 1975 Cannon-Manufacture at Pippingford, Sussex. *Post Medieval Archaeology* 9:1-37.
- Cruz-Urbe, Kathryn, and Richard G. Klein
- 1986 Pascal Programs for Computing Taxonomic Abundance in Samples of Fossil Mammals. *Journal of Archaeological Science* 13:171-187.
- Daily Evening Bulletin*
- 1857 *Daily Evening Bulletin*, 11 February 1857.
- Daniels, Douglas Henry
- 1980 *Afro-Americans, the San Francisco Bay Area, and the Golden Gate National Recreation Area, 1850-1960*. Prepared for the Golden Gate National Recreation Area. Ms. on file, United States Department of the Interior, National Park Service, Interagency Resources Division, National Register Programs, San Francisco.
- Dansie, Amy
- 1979 Beef, Bobcat, and other Beast Bones: Faunal Remains from Lovelock's Chinatown. In *Archaeological and Historical Studies at Ninth and Amherst, Lovelock, Nevada*, Vol. 2, edited by E. M. Hattori, M. Rusco, and D. R. Touhy, pp. 347-410. Nevada State Museum Archaeological Services Reports.
- Davidson, Paula E.
- 1982 Patterns in Urban Food Ways: An Example from Early Twentieth Century Atlanta. In *Archaeology of Urban America: The Search for Pattern and Process*, edited by R. S. Dickens, Jr., pp. 381-398. Academic Press, New York.
- Davis, J. T.
- 1961 *Trade Routes and Economic Exchange Among the Indians of California*. University of California Archaeological Survey Reports No. 54.
- Davis, William Heath
- 1889 *Sixty Years in California*. A. J. Leary, San Francisco
- DeCunzo, Lu Ann.
- 1982 Household, Economics, and Ethnicity in Patterson's Dublin 1829-1915: The Van Houten Street Parking Lot. *Northeast Historical Archaeology* 11:9-25.
- 1987 Adapting to City and Factory: Illustrations from the Industrialization and Urbanization of Patterson, New Jersey. In *Consumer Choice in Historical Archaeology*, edited by Suzanne M. Spencer-Wood, pp. 261-293. Plenum Press, New York.
- Deetz, James
- 1977 *In Small Things Forgotten*. Anchor Books, Doubleday, New York.
- 1987 Harrington Histograms. *American Archeology* 6(1):62-67.
- 1988 American Historical Archaeology: Methods and Results. *Science* 239:362-367.
- Delgado, James P.
- 1979a No Longer a Buoyant Ship-Unearthing the Gold Rush Storeship Niantic. *California History: The Magazine of the California Historical Society* 53(4):316-325.

- 1979b The *Niantic*: Participant in Creating a New California. *Sea History* 15:44.
- 1980 The Buried Gold Rush Fleet of San Francisco. Paper presented at the Maritime History Conference, San Jose, California.
- 1981a Gold Rush Jail: The Prison Ship Euphemia. *California History: The Magazine of the California Historical Society* 60(2):134-141.
- 1981b What Becomes of the Old Ships? Dismantling the Gold Rush Fleet of San Francisco. *The Pacific Historian* 25(4):1-9.
- Delgado, James P., and Gordon S. Chappell
- 1978a Archaeological Site Record for CA-SFR-81H (*Niantic* Storeship). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1978b National Register of Historic Places Registration Form for the Sailing Ship *Niantic*. United States Department of the Interior, National Park Service, Interagency Resources Division, National Register Programs, San Francisco. Ms. on file, S-3193, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Delgado, James P., and Stephen A. Haller
- 1989a *Submerged Cultural Resource Assessment. Golden Gate National Recreation Area, Gulf of the Farallones National Marine Sanctuary, and Point Reyes National Seashore*. Ms. on file, S-11332, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1989b *Shipwrecks at the Golden Gate: A History of Vessel Losses from Duxbury Reef to Mussel Rock*. Lexikos, n.p.
- DeSante, David F., and David G. Ainley
- 1980 The Avifauna of the South Farallon Islands, California. *Cooper Ornithological Society Studies in Avian Biology* 4:1-104.
- Desgrandchamp, C. S.
- 1976 *Estuary Exploitation in Aboriginal California*. Unpublished Master's thesis, San Francisco State University, San Francisco. Ms. on file, S-2376, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.
- Dethlefsen, Edwin
- 1990 *Inferences for Tampa Interstate Study from Sanborn Maps*. Ms. on file, at Janus Research, 400 Fourth Street North, St. Petersburg, Florida.
- Dewey, John
- 1956 *The Child and the Curriculum*. 2d ed. University of Chicago Press, Chicago, Illinois.
- Dickert, P. F.
- 1986 Tertiary Phosphatic Facies of the Coast Ranges. *Geology of Northern California Bulletin* 190:289-304. California Division of Mines and Geology, San Francisco.
- Dimbleby, Geoffrey W.
- 1985 *The Palynology of Archaeological Sites*. Academic Press, New York.
- Directory Publishing Company
- 1882 *Langley's San Francisco Directory for the year Commencing April, 1882*. Francis, Valentine, San Francisco.
- 1883 *Langley's San Francisco Directory for the year Commencing April, 1883*. Francis, Valentine, San Francisco.
- 1884 *Langley's San Francisco Directory for the year Commencing April, 1884*. Francis, Valentine, San Francisco.
- Dobie, Charles Caldwell
- 1933 *San Francisco: A Pageant*. New York and London, n.p. (As cited in Lang 1979).
- Doughty, Robin W.
- 1971 San Francisco's Nineteenth-Century Egg Basket: The Farallons. *Geographical Review* 61:554-572.
- Dow, Gerald R.
- 1973 *Bay Fill in San Francisco: A History of Change*. Unpublished Master's thesis, California State University, San Francisco.
- Drucker, Lesley M.
- 1981 Socioeconomic Patterning at an Undocumented Late 18th Century Lowcountry Site: Spiers Landing, South Carolina. *Historical Archaeology* 15(2):58-68.
- Dunlop, Deborah
- 1978 National Register of Historic Places Registration Form for 17-55 Ohio St/17-55 Osgood Street (CA-SFR-90). Ms. on file, E-67/S-3225, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Gifford, E. W.

- 1912 Notes Appended to Archaeological Site Record for CA-SFR-6. Ms. on file, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.
- 1916 Composition of California Shellmounds. *University of California Publications in American Archaeology and Ethnology* 12(1):1-29.
- 1940 Californian Bone Artifacts. *University of California Anthropological Records* 3:153-257.
- 1947 Californian Shell Artifacts. *University of California Anthropological Records* 9(1).

Gifford-Gonzalez, Diane

- 1991 Bones Are Not Enough: Analogues, Knowledge, and Interpretative Strategies in Zooarchaeology. *Journal of Anthropological Archaeology* 10:215-254.

Gill, Harold

- 1965 *The Blacksmith in Colonial Virginia*. Colonial Williamsburg Foundation, Williamsburg, Virginia.
- 1978 *The Blacksmith in Eighteenth-Century Williamsburg*. Colonial Williamsburg Foundation, Williamsburg, Virginia.

Glassow, Michael A., Larry R. Wilcoxon, and Jon Erlandson

- 1988 Cultural and Environmental Change during the Early Period of Santa Barbara Channel Prehistory. In *The Archaeology of Prehistoric Coastlines*, edited by Geoff Bailey and John Parkington, pp. 64-77. Cambridge University Press, Cambridge, Massachusetts.

Gleeson, Edgar T.

- 1926 Clementina Street Boys in the Old Days. *South of Market Journal*, San Francisco.

Goldstein, Solomon

- 1960 Degradation of Pollen by Phycomycetes. *Ecology* 41:543-545.

Goudie, A.

- 1983 *Environmental Change*. Clarendon Press, Oxford.

Grayson, Donald K.

- 1984 *Quantitative Zooarchaeology: Topics in the Analysis of Archaeological Faunas*. Academic Press, Orlando, Florida.

Greenwood, Roberta S.

- 1980 The Chinese on Main Street. In *Archaeological Perspectives on Ethnicity in America: Afro-American and Asian American Culture History*, edited by Robert L. Schuyler, pp. 113-123. Baywood, Farmingdale, New York.

Grossman, Joel W.

- 1991 Civil War Archaeology in the Age of Superfund: The Role of Espionage and Foreign Intelligence in the Development of Heavy Ordnance at the West Point Foundry, Cold Spring, New York. Paper presented at the Society for Historical Archaeology Annual Meeting, Richmond, Virginia.

Guilday, John E.

- 1970 Appendix: Animal Remains from Archaeological Excavations at Fort Ligonier. *Annals of Carnegie Museum* 42:177-186.

Gust, Sherri M.

- 1982a Faunal Analysis and Butchering. In *The Ontiveros Adobe: Early Rancho Life in Alta California*, edited by J. D. Frierman, pp. 101-144. Ms. on file, The Redevelopment Agency, City of Santa Fe Springs, Santa Fe Springs, California.
- 1982b Mammalian Remains. In *Archaeological and Historical Studies of the IJ56 Block, Sacramento, California: An Early Chinese Community*, edited by Mary Praetzelis and Adrian Praetzelis, pp. 87-112. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1983 Problems and Prospects in Nineteenth Century California Zooarchaeology. In *Forgotten Places and Things: Archaeological Perspectives in American History*, compiled and edited by Albert E. Ward, pp. 341-348. Contributions to Anthropological Studies No. 3. Center for Anthropological Studies, Albuquerque.
- 1984 Mammalian Fauna from the Woodland Opera House Site. In *The Chinese Laundry on Second Street: Papers on Archeology at the Woodland Opera House Site*, edited by D. L. Felton, F. Lortie, and P. D. Schulz, pp. 181-192. California Archaeological Reports 24. California Department of Parks and Recreation, Cultural Resource Management Unit.
- 1990 Mammalian Fauna. In *For a Good Boy: Victorians on Sacramento's J Street*, edited by Mary Praetzelis and Adrian Praetzelis, pp. 203-205. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.

Gust Sherri M., and Peter D. Schulz

- 1980 Mammalian Remains. In *Historical Archaeology at the Golden Eagle Site*, edited by Mary Praetzelis, Adrian Praetzelis, and Marley R. Brown, III, pp. 3-1 to 3-19. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.

- Gutman, Herman
1977 *Work, Culture, and Society in Industrializing America*. Vantage Books, New York.
- Hales, L. Stanton, Jr., and Elizabeth J. Reitz
1992 Historical Changes in Age and Growth of Atlantic Croaker, *Micropogonias undulatus* (Perciformes: Sciaenidae). *Journal of Archaeological Science* 19:73-99.
- Hall, Martin
1992 Small Things & the Mobile, Conflictual Fusion of Power, Fear, & Desire. In *The Art and Mystery of Historical Archaeology: Essays in Honor of James Deetz*, edited by Anne Yentsch and Mary C. Beaudry, pp. 373-399. CRC Press, Boca Raton, Florida.
- Hall, N. T.
1965 Late Cenozoic Stratigraphy Between Mussel Rock and Fleishhaker Zoo, San Francisco Peninsula. In *INQUA: International Association for Quaternary Research VII Congress, Guidebook for Field Conference I, Northern Great Basin and California*, pp. 151-165.
- Hamblin, Nancy L.
1984 *Animal Use by the Cozumel Maya*. University of Arizona Press, Tucson, Arizona.
- Hardesty, Donald L.
1988 *The Archaeology of Mining and Miners: A View from the Silver State*. The Society for Historical Archaeology Special Publication Series No. 6.
1989 Gender Roles on the American Mining Frontier: Documentary Models and Archaeological Strategies. Paper presented at the 22nd Chacmool Conference, University of Calgary, Calgary, Alberta, Canada. November 11, 1989.
- Hareven, Tamara K.
1982 *Family Time and Industrial Time: The Relationship between the Family and Work in a New England Industrial Community*. Cambridge University Press, New York
- Harlow, Neal
1950 *The Maps of San Francisco Bay from the Spanish Discovery in 1769 to the American Occupation*. The Book Club of California, San Francisco.
- Harmon, Albert, Harlan Soeten, and Karl Kortum
1963 Notes on Gold Rush Ships. Ms. on file, J. Porter Shaw Library, National Maritime Historic Park, San Francisco.
- Harpending, Asbury
1913 *The Great Diamond Hoax and other Stirring Incidents in the Life of Asbury Harpending*. Edited by James H. Wilkins, San Francisco.
- Hart, J. D.
1978 *A Companion to California*. Oxford University Press, New York.
1987 *A Companion to California* (revised and expanded). Oxford University Press, New York.
- Harvey, David
1985 Its Ironmaking Time. *Colonial Williamsburg* 8(2):9-12.
- Hattori, Eugene M., and Jerre L. Kosta
1990 Packed Pork and Other Foodstuffs from the California Gold Rush. In *The Hoff Store Site and Gold Rush Merchandise from San Francisco, California*, edited by Allen G. Pastron and Eugene M. Hattori, pp. 75-93. The Society for Historical Archaeology Special Publication Series No. 7.
- Havinga, A. J.
1967 Palynology and Pollen Preservation. *Review of Palaeobotany and Palynology* 2:81-98.
- Haynes, Gary
1988a Longitudinal Studies of African Elephant Death and Bone Deposits. *Journal of Archaeological Science* 15:131-157.
1988b Mass Deaths and Serial Predation: Comparative Taphonomic Studies of Modern Large Mammal Death Sites. *Journal of Archaeological Science* 15:219-235.
- Hegler, R., and Michael J. Moratto
1973 *A Deeply Buried Aboriginal Skeleton from the U.S. Army Presidio, San Francisco, California*. Robert E. Schenk Memorial Archives of California Archaeology No. 38. San Francisco.
- Heid, James
n.d. *San Francisco Waste Water Management Archaeological Report*. Ms. on file, S-3242, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Heintzelman-Muego, Andrea
1983 Construction Material and Design of 19th-Century and Earlier Wharves: An Urban Archaeological Concern. Paper presented at the Annual Conference of the Society for Historical Archaeology, Denver.

Heizer, Robert F. (Editor)

- 1976 Check List and Index to Reports of the University of California Archaeological Survey, Nos. 32 (1955) to 74 (1968); Check List of Contributions of the Archaeological Research Facility of the Department of Anthropology, No. 1 (1965) to No. 30 (1976) And Other Information on Activities of the Survey and the Archaeological Research Facility, 1948-1972. *Reports of the University of California Archaeological Survey* No. 75. Archaeological Research Facility, Department of Anthropology, University of California, Berkeley. Revised edition, originally indexed in 1972.

Helley, E.J., K.R. Lajoie, W.E. Spangle, and M.L. Blair

- 1979 *Flatland Deposits of the San Francisco Bay Region, California - Their Geology and Engineering Properties and their Importance to Comprehensive Planning*. U.S. Geological Survey Professional Paper 943. Washington, D.C.

Hendry, G. W., and J. N. Bowman

- 1940a *The Spanish and Mexican Adobe and Other Buildings in the Nine San Francisco Bay Counties, 1776 to about 1850*. Vol. IX. *San Francisco County 1776 to 1852*. Ms. on file, Bancroft Library, University of California, Berkeley.

Henn, Roselle E.

- 1985 Reconstructing the Urban Foodchain: Advances and Problems in Interpreting Faunal Remains Recovered from Household Deposits. *American Archaeology* 5(3):202-209

Henn, W. G., and Robert E. Schenk

- 1970 *An Archaeological Analysis of Skeletal Material Excavated from the Civic Center of BART*. Robert E. Schenk Memorial Archives of California Archaeology No. 11. San Francisco.

Henn, Winfield, Tom Jackson, and Julius Schlocker

- 1972 Burial of Human Bones at the "BART" Site, San Francisco, California. *Geology* 25:298-299.

Henry, Susan L.

- 1987a Factors Influencing Consumer Behavior in Turn-of-the-Century Phoenix, Arizona. In *Consumer Choice in Historical Archaeology*, edited by Suzanne M. Spencer-Wood, pp. 359-381. Plenum Press, New York.
- 1987b A Chicken in Every Pot: The Urban Subsistence Pattern in Turn-Of-The-Century Phoenix, Arizona. In *Living in Cities: Current Research in Urban Archaeology*, edited by Edward Staski, pp. 19-28. The Society for Historical Archaeology Special Publication Series No. 5.

Hesse, Brian

- 1982 Bias in the Zooarchaeological Record: Suggestions for Interpretation of Bone Counts in Faunal Samples from the Plains. In *Plains Indian Studies: A Collection of Essays in Honor of John C. Ewers and Waldo R. Wedel*, edited by D. H. Ubelaker and H. J. Viola, pp. 157-172. Smithsonian Contributions to Anthropology 30.

Hesse, Brian, and Paula Wapnish

- 1985 Animal Bone Archaeology: From Objectives to Analysis. *Taraxacum Manuals on Archaeology* 5:1-132.

Hildebrandt, William R.

- 1984 Late Period Hunting Adaptations on the North Coast of California. *Journal of California and Great Basin Anthropology* 6:189-206.

Hildebrandt, William R., Joyce Bizjak, Richard Fitzgerald, Rhonda

Gillett, Jeff Hall, Peggy Hartsell, Mark Hylkema, Eric Kauffman, Leslie Knott, John Lopez, Murial Maverick, Susan Menkhus, Blandy Merrill, Jim Nelson, Jean O'Neil, and Glenn Wilson

- 1984 Prehistoric Hunting Patterns in Central California. *Archives of California Prehistory* 3:43-67. Coyote Press, Salinas, California.

Hinks, Stephen

- 1988 *A Structural and Functional Analysis of Eighteenth Century Buttons*. Unpublished Master's thesis, Department of Anthropology, College of William and Mary, Williamsburg, Virginia.

Hittell, John S.

- n.d. Hittell Scrapbooks, Newspaper Clippings on California Industries. Ms. on file. Bancroft Library, University of California at Berkeley.
- 1878 *A History of San Francisco and Incidentally of the State of California*. A. L. Bancroft, San Francisco.
- 1882 *The Commerce and Industries of the Pacific Coast of North America*. A. L. Bancroft, San Francisco.

Hobart Daily Courier

- 1850 *Hobart Daily Courier*, 20 March 1850.

Hodder, Ian

- 1989 *The Meanings of Things: Material Culture and Symbolic Expression*. Unwin, Hyman, London.

Holloway, Richard G., and Vaughn M. Bryant, Jr.

- 1987 New Directions of Palynology in Ethnobiology. *Journal of Ethnobiology* 6: 47-65.

Holman and Associates

- 1990 *Report on Potential Cultural Resources for the San Francisco Downtown Terminal Relocation Project*. Prepared for CHMM, Environmental Waste Management, Gibbs & Hill, Inc., San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.

Holman, M. P., L. R. Barker, L. Reynolds, and J. Miller

- 1977 *The Sutro Bath Sites: A Preliminary Archaeological Investigation*. Western Region, National Park Service, United States Department of the Interior, San Francisco. Ms. on file, S-5349, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.

Holmes, L.C. and J.W. Nelson

- 1917 *Reconnaissance Soil Survey of the San Francisco Bay Region, California*. United States Government Printing Office, Washington, D.C.

Honerkamp, Nicholas, R. Bruce Council, and Charles H. Fairbanks

- 1983 *The Reality of the City: Urban Archaeology at the Telfair Site, Savannah Georgia*. General Services Administration, Athens, Georgia.

Honerkamp, Nick, and Elizabeth J. Reitz

- 1983 Eighteenth Century British Colonial Adaptations on the Coast of Georgia: The Faunal Evidence. In *Forgotten Places and Things: Archaeological Perspectives in American History*, compiled and edited by Albert E. Ward, pp. 335-339. Contributions to Anthropological Studies No. 3. Center for Anthropological Studies. Albuquerque.

Honeysett, Elizabeth A., and Peter D. Schulz

- 1990 Burned Seeds from a Gold Rush Store in Sacramento, California. *Historical Archaeology* 24(1):96-103.

Horton, D. R.

- 1984 Minimum Numbers: A Consideration. *Journal of Archaeological Science* 11:255-271.

Howard, A. D.

- 1979 *Geologic History of Middle California*. University of California Press, Berkeley.

Howard, H.

- 1929 Avifauna of Emeryville. *University of California Publications in Zoology* 32:301-394.

Howland, Angell, and King

- 1865-1868 Miners' Foundry Annual Circular. San Francisco.

Huelsbeck, David R.

- 1989 Zooarchaeological Measures Revisited. *Historical Archaeology* 23:113-117.
1991 Faunal Remains and Consumer Behavior: What Is Being Measured? *Historical Archaeology* 25:62-76.

Huey, Paul R.

- 1984 Old Slip and Cruger's Wharf at New York. *Historical Archaeology* 18(1):15-37.

Huggins, D. H.

- 1939 *Continuation of the Annals of San Francisco, Part I, from June 1, 1854, to December 31, 1855*. California Historical Society Special Publication No. 15. San Francisco.

Isaac, Glenn

- 1968 Correspondence on the archaeological findings at the William Paca Garden in Annapolis, Maryland. Ms. on file, William Paca Garden, Historic Annapolis Foundation, Annapolis, Maryland.

Jackson, H. Edwin

- 1989 The Trouble with Transformations: Effects of Sample Size and Sample Composition on Meat Weight Estimates Based on Skeletal Mass Allometry. *Journal of Archaeological Science* 16:601-610.

Jenkins, D. G.

- 1951 Opening of the Golden Gate. Geologic Guidebook of the San Francisco Bay Counties. *California Division of Mines Bulletin* 154:11-29. San Francisco.

Johnson, Eileen

- 1985 Current Developments in Bone Technology. In *Advances in Archaeological Method and Theory*, vol. 8, edited Michael B. Schiffer, pp. 157-235. Academic Press, Orlando, Florida.

Jolley, Robert L.

- 1983 North American Historic Sites Zooarchaeology. *Historical Archaeology* 17(2):66-79.

Jones, Kevin T., and Duncan Metcalfe

- 1988 Bare Bones Archaeology: Bone Marrow Indices and Efficiency. *Journal of Archaeological Science* 15:415-423.

Jones, Olive, Catherine Sullivan, George L. Miller, E. Ann Smith, Jane E. Harris, and Kevin Lunn

- 1985 *The Parks Canada Glass Glossary*. Parks Canada, Ottawa.

Jones, T.

- 1991 Marine-Resource Value and the Priority of Coastal Settlement: A California Perspective. *American Antiquity* 56:419-443.

Kelly, Roger E.

- 1976 *Archeological Resources of Golden Gate National Recreation Area*. United States Department of the Interior, National Park Service, Division of Cultural Resources Management, San Francisco. Ms. on file, S-3214, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1980 *Archeological Studies in Historic Sites. Golden Gate National Recreation Area, San Francisco*. United States Department of the Interior, National Park Service, Division of Cultural Resources Management, San Francisco. Ms. on file, S-2476, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1981 Sensitivity Maps for Historical Archeological Resources: Golden Gate National Recreation Area, California. Maps on file, National Park Service, Western Region, National Register Programs, San Francisco.

Kelso, Gerald

- 1987a Palynological Exploration of the Boott Mill Boarding House. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. I, *Life at the Boarding Houses*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 138-145. Cultural Resource Management Study No. 18, Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.
- 1987b Palynological Exploration of Land Use at the Kirk Street Agents' House. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. I, *Life at the Boarding Houses*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 97-116. Cultural Resource Management Study No. 18, Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.
- 1987c *Fort Necessity, Pennsylvania, Hillside Pollen Core, Interim Report, July, 22, 1987*. Ms. on file, Science Division, National Park Service, Mid-Atlantic Regional Office, Philadelphia.
- 1988 Exploratory Pollen Analysis at Morven, Princeton, New Jersey. In *Archaeobotanical Results from the 1987 Excavation at Morven Princeton, New Jersey*, edited by Naomi F. Miller and Anne Yentsch. Morven Interim Report No. 2. Ms. on file, New Jersey State Museum, Trenton, New Jersey.
- 1991 Interdisciplinary Research in Historic Landscape Management. *CRM Supplement* 16(6):1-11.

Kelso, Gerald, and Mary C. Beaudry

- 1990 Pollen Analysis and Urban Land Use: The Environs of Scottow's Dock in 17th, 18th, and Early 19th Century Boston. *Historical Archaeology* 24(1):61-81.

Kelso, Gerald K., William F. Fisher, Karl J. Reinhard, and Stephen A. Mrozowski.

- 1989 Contextual Archaeology at the Boott Mill Boardinghouses. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. III. *The Lowell Boarding House System as a Way of Life*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 178-231. Cultural Resource Management Study No. 21. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

Kelso, Gerald K., Stephen A. Mrozowski, and William F. Fisher

- 1987 Contextual Archeology at the Kirk Street Agents' House Site. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. II. *The Kirk Street Agents' House*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 97-127. Cultural Resource Management Study No. 19. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

Kelso, Gerald K., and J. Schoss

- 1983 Exploratory Pollen Analysis of the Bostonian Hotel Site Sediments. In *Archaeology of the Bostonian Hotel Site*, edited by J. W. Bradley, N. DePaoli, N. Seasholes, P. McDowell, G. K. Kelso, and J. Schoss, pp. 67-76. Massachusetts Historical Commission Occasional Publications in Archaeology and History No. 2. Boston.

Kelso, Gerald K., R. Stone, and J. F. Karish

- 1990 Pollen Analysis is Historic Landscape Studies At Fort Necessity National Battlefield. *Park Science. A Resource Management Bulletin* 10(2):10-11.

Kent, George F.

- 1941 Life in California in 1849. *California Historical Society Quarterly* 20(1), San Francisco.

Kerr, J. R.

- 1881 The Chinese Questions Analyzed. Ms. on file, Bancroft Library, University of California, Berkeley.

Kerr, S.

- 1977 Archaeological Site Record for CA-SFR-27H (Gold Rush Era dump). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1978a Archaeological Site Record for CA-SFR-28 (Civic Center BART). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

- 1978b Archaeological Site Record for CA-SFR-33H (Historic ship relics). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- King, J. E., W. E. Klippel, and R. Duffield
1975 Pollen Preservation and Archaeology in Eastern North America. *American Antiquity* 40:180-190.
- Klebingat, Captain Fred
1950-1986 Collected Letters, Interviews, and Oral History by Karl Kortum, Chief Curator. Ms. on file, National Maritime Historical Park, San Francisco.
- Klein, Richard G., and Kathryn Cruz-Urbe
1989 Why Does Skeletal Part Representation Differ between Smaller and Larger Bovids at Klasies River Mouth and other Archaeological Sites? *Journal of Archaeological Science* 16:363-381.
- Klein, Richard G., and Kathryn Cruz-Urbe
1984 *The Analysis of Animal Bones from Archaeological Sites*. University of Chicago Press, Chicago.
- Knoerl, John J.
1986 *Historic Archaeological Properties: Guidelines for their Evaluation*. National Register Bulletin No. 36 (Draft). U.S. Department of the Interior, Washington, D.C.
- Kreutzer, Lee Ann
1988 Megafaunal Butchering at Lubbock Lake, Texas: A Taphonomic Reanalysis. *Quaternary Research* 30:221-231.
- Kroeber, A. L.
1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C.
- Lamson, James
1878 *Round Cape Horn: The Voyage of the Passenger Ship James W. Paige, from Maine to California in the Year 1852*. Press of O. F. and W. H. Knowles, Bangor, Maine.
- Landon, David
1987a Foodways in the Lowell Boardinghouses: The Historical and Zoological Evidence. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. I, *Life at the Boardinghouses: A Preliminary Report*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 115-137. Cultural Resource Management Study No. 18. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.
- 1987b Zooarchaeological Analysis of Faunal Remains from the Kirk Street Agent's House. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. II, *The Kirk Street Agent's House*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 130-142. Cultural Resource Management Study No. 19. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.
- 1989 Domestic Ideology and the Economics of Boardinghouse Keeping. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. III, *The Lowell Boarding House System as a Way of Life*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 37-48. Cultural Resource Management Study No. 21. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.
- Lang, Kathryn M.
1979 *Golden Gate National Recreation Area: The Indian and Hispanic Heritage of a Modern Urban Park*. United States Department of the Interior, National Park Service, Golden Gate National Recreation Area, Fort Mason, San Francisco. Ms. on file, United States Department of the Interior, National Park Service, Interagency Resources Division, National Register Programs, San Francisco.
- Langley, Henry G.
1859 *General Business Directory of Citizens and Dealers of the City of San Francisco for the Year Commencing June, 1859*. Commercial Steam Presses, Valentine, San Francisco.
- 1861 *San Francisco Directory for the Year Commencing September, 1861*. Commercial Steam Presses, Valentine, San Francisco.
- 1862 *San Francisco Directory for the Year Commencing September, 1862*. Valentine, San Francisco.
- 1863 *San Francisco Directory for the Year Commencing October, 1863*. Towne and Bacon, San Francisco.
- 1865 *San Francisco Directory for the Year Commencing December, 1865*. Towne and Bacon, San Francisco.
- 1867 *San Francisco Directory for the Year Commencing September, 1867*. Henry G. Langley, San Francisco.
- 1869 *San Francisco Directory for the Year Commencing December, 1869*. Henry G. Langley, San Francisco.
- 1871 *San Francisco Directory for the Year Commencing April, 1871*. Henry G. Langley, San Francisco.
- 1872 *San Francisco Directory for the Year Commencing March, 1872*. Henry G. Langley, San Francisco.
- 1873 *San Francisco Directory for the Year Commencing April, 1873*. Henry G. Langley, San Francisco.
- 1874 *San Francisco Directory for the Year Commencing March, 1874*. Henry G. Langley, San Francisco.
- 1875 *San Francisco Directory for the Year Commencing April, 1875*. Henry G. Langley, San Francisco.

- Dutton, David
1989 "Thrasher's China" or Colored Porcelain: Ceramics from a Boott Mills Boardinghouse and Tenement. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. III *The Lowell Boarding House System as a Way of Life*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 83- 120. Cultural Resource Management Study No. 21. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.
- Eldredge, Z. S.
[1915] *History of California*. 5 vols. Century History Company, New York.
- Elia, Ricardo J., David B. Landon, and Nancy S. Seasholes
1989 *Phase II Archaeological Investigations of the Central Artery Third Harbor Tunnel Project in Boston, Massachusetts*. Vol. 1: *Text and Illustrations*. Office of Public Archaeology Report of Investigations No. 81. Boston University, Boston, Massachusetts.
- Eliassen, John Weld
1974 National Register of Historic Places Registration Form for The City of Paris (CA-SFR-62H). Ms. on file, S-3213, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Elliott, Suzanne W.
1977 *Historical Archeology and the National Market: A Vermont Perspective, 1795-1920*. Ph.D. dissertation, Department of Anthropology, University of Massachusetts. University Microfilms, Ann Arbor.
- Elsasser, Albert B.
1978 Development of Regional Prehistoric Cultures. In *California*, edited by R.F. Heizer, pp. 37-57. Handbook of North American Indians, Vol. 8. Smithsonian Institution, Washington, D.C.
- Emslie, Steven D.
1984 Faunal Remains and Archeological Research Designs: A Need for Consistency. *American Archaeology* 4(2):132-139.
- Engelhardt, Fr. Zephyrin
1924 *The Missions and Missionaries of California: San Francisco or Mission Dolores*. Franciscan Herald Press, Chicago.
- Erlandson, J. M.
1988 The Role of Shellfish in Prehistoric Economies: A Protein Perspective. *American Antiquity* 53:102-109.
- Ewen, Charles R.
1986 Fur Trade Archaeology: A Study of Frontier Hierarchies. *Historical Archaeology* 20(1):15-28.
- Fairbanks, Charles H.
1984 The Plantation Archaeology of the Southeastern Coast. *Historical Archaeology* 18(1):1-14.
- Faulkner, Alaric, Kim Mark Peters, David P. Sell, and Edwin S. Dethlefsen
1978 *Port and Market: Archaeology of the Central Waterfront, Newburyport, Massachusetts*. National Park Service, Interagency Archeological Services, Atlantic, Newburyport Press, Newburyport, Massachusetts.
- Felton, David L., and Peter D. Schulz
1983 *The Diaz Collection: Material Culture and Social Change in Mid-Nineteenth Century Monterey*. California Archaeological Reports No. 23. California Department of Parks and Recreation, Cultural Resource Management Unit, Sacramento.
- Fitzhamon, A. G.
1928-1929 *The Streets of San Francisco*. San Francisco Chronicle, San Francisco.
- Fitzsimons, Gary (Editor)
1928 *Blair County and Cambria County, Pennsylvania: An Inventory of Historic Engineering and Industrial Sites*. National Park Service, Washington, D.C.
- Font, Fray Pedro
1933 *Font's Complete Diary*. University of California Press, Berkeley.
- Fox, K. F., Jr.
1983 Tectonic Setting of Late Miocene, Pliocene, and Pleistocene Rocks in Part of the Coast Ranges North of San Francisco, California. *U.S. Geological Survey Professional Paper* 1239.
- Francis, Valentine and Company
1880 *Langley's San Francisco Directory for the year Commencing April, 1880*. Francis, Valentine, San Francisco.
1888 *Langley's San Francisco Directory for the year Commencing April, 1888*. Francis, Valentine, San Francisco.
- Fredrickson, David A.
1973 Early Cultures of the North Coast Ranges, California. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Davis.

- 1974 Cultural Diversity in Early Central California: A View from the North Coast Ranges. *The Journal of California Anthropology* 1(1):41-54.
- Fuller, William P.
1939 *Ninety Years—The Story of William P. Fuller*. San Francisco, n.p.
- G.-Naidu, R. B.
1982 Analysis and Recommendations on the Paleontologic Resources of the Bayside Facilities Project Route. In *San Francisco Bayside Historical Cultural Resource Survey*, edited by Resource Consultants, pp. 21-26; 278. Prepared for the San Francisco Clean Water Program. Ms. on file, California Archaeological Inventory, Northwest Information Center, Sonoma State University, Rohnert Park, California.
- Gamble, Clive
1978 Optimizing Information from Studies of Faunal Remains. In *Sampling in Contemporary British Archaeology*, edited by C. C. Gamble and S. Shennan, pp. 321-353. British Archaeological Reports, British Series 50.
- Garaventa, Donna M.
1979 *Fat Yuen-A Chinese Laundry, 707 Howard Street, San Francisco. Central Block 3, Yerba Buena Center Testing Program*. (Draft) Prepared by Archeo-Tec, Oakland. Ms. on file with the author.
- Garaventa, Donna M., and Stuart A. Guedon with David G. Brittin, Steven J. Rossa, and John Yelding-Sloan
1992 *Cultural Resources Evaluation For The Environmental Assessment of The Golden Gate Bridge Seismic Retrofit Project, San Francisco and Marin Counties, California* (Draft). Prepared for T. Y. LIN International, Inc., San Francisco.
- Garaventa, Donna M., and Allen G. Pastron
1983 Chinese Ceramics from a San Francisco Dump Site. In *Forgotten Places and Things: Archaeological Perspectives on American History*, compiled and edited by Albert E. Ward, pp. 295-320. Contributions to Anthropological Studies No. 3. Center for Anthropological Studies, Albuquerque.
- Garrow, Patrick H.
1987 The Use of Converging Lines of Evidence for Determining Socioeconomic Status. In *Consumer Choice in Historical Archaeology*, edited by Suzanne M. Spencer-Wood, pp. 217-231. Plenum Press, New York.
- Gautier, Achilles
1984 How Do I Count You, Let Me Count the Ways? Problems of Archaeozoological Quantification. In *Animals and Archaeology: 4. Husbandry in Europe*, edited by C. Grigson and J. Clutton-Brock, pp. 237-251. British Archaeological Reports International Series 227.
- Geismar, Joan H.
1983 Landfill. In *The Archaeological Investigation of the 175 Water Street Block, New York City*, Vol. 2, edited by Joan H. Geismar, pp. 672-713. Ms. on file, New York City Landmarks Preservation Commission, New York.
1985 *Archeological Monitoring: The Shearson Lehman/American Express Center: Washington Street Urban Renewal Area, East Orange, New Jersey*.
1986 *Archaeological Investigation of Site 1 of the Washington Street Urban Renewal Area*. Prepared by Cultural Resource Group, Louis Berger & Associates, Inc. Ms. on file, New York City Landmarks Preservation Commission, New York.
1987 Landfill and Health, A Municipal Concern or, Telling It Like It Was. *Northeast Historical Archaeology* 16:49-57.
- Geismar, Joan H. (Editor)
1983 *The Archaeological Investigation of the 175 Water Street Block, New York City*. Professional Service Industries, Inc., Soil Systems Division, New York.
- George, Henry
1868 What the Railroads Will Bring. *Overland Monthly*, Vol. 1 (October):297-306.
1879 The State. *Daily Evening Bulletin*, 7 June.
1880 The Kearney Agitation in California. *Popular Science Monthly* XVII (August):433-453. New York.
1929 *Progress and Poverty*. Modern Library, New York. Originally published 1879, Appleton Press, New York.
- Gerlach, Heinz W.
1969 *The Geographical Factors that Influenced the Lifespan of the Mount Diablo Coal Mining District, Contra Costa County, California*. Unpublished Master's thesis in Geography, San Francisco State College.
- Gerow, Bert A.
1968 *An Analysis of the University Village Complex, with a Reappraisal of Central California Archaeology*. Stanford University Press, Stanford, California.
- Gifford, Diane P.
1981 Taphonomy and Paleoecology: A Critical Review of Archaeology's Sister Disciplines. In *Advances in Archaeological Method and Theory*, Vol. 4, edited by Michael B. Schiffer, pp. 365-438. Academic Press, New York.

- 1876 *San Francisco Directory for the Year Commencing March, 1876*. Henry G. Langley, San Francisco.
 - 1877 *San Francisco Directory for the Year Commencing April, 1877*. Henry G. Langley, San Francisco.
 - 1878 *San Francisco Directory for the Year Commencing February, 1878*. Henry G. Langley, San Francisco.
 - 1879 *San Francisco Directory for the Year Commencing April, 1879*. Henry G. Langley, San Francisco.
 - 1880 *San Francisco Directory for the Year Commencing April, 1880*. Henry G. Langley, San Francisco.
- Langenwalter, Paul E., II
- 1980 The Archaeology of 19th Century Chinese Subsistence at the Lower China Store, Madera County, California. In *Archaeological Perspectives on Ethnicity in America: Afro-American and Asian American Culture History*, edited by Robert L. Schuyler, pp. 102-112. Baywood, Farmingdale, New York.
 - 1987 Mammals and Reptiles as Food and Medicine in Riverside's Chinatown. In *Wong Ho Leun: An American Chinatown*, Vol. 2, *Archaeology*, edited by Great Basin Foundation, pp. 53-106. Great Basin Foundation, Center for Anthropological Research, San Diego, California.
- Langenwalter, Paul E., II, and Rebecca E. Langenwalter
- 1987 Overview of the Vertebrate Faunal Remains from Riverside's Chinatown. In *Wong Ho Leun: An American Chinatown*, Vol. 2, *Archaeology*, edited by Great Basin Foundation, pp. 45-52. Great Basin Foundation, Center for Anthropological Research, San Diego, California.
- Langenwalter, Paul E., II, and L. W. McKee
- 1985 Vertebrate Faunal Remains from the Neophyte Dormitory. In *Excavations at Mission San Antonio 1976-1978*, edited by Robert L. Hoover and Julia G. Costello, pp. 94-116. Monograph No. 26. Institute of Archaeology, University of California, Los Angeles.
- Langellier, John Phillip, and Daniel Bernard Rosen
- 1991a *Bastion by the Bay: El Presidio de San Francisco under Spain and Mexico, 1776-1846* (Draft). Ms. on file, United States Department of the Interior, National Park Service, Interagency Resources Division, National Register Programs, San Francisco.
 - 1991b *El Presidio de San Francisco: A History Under Spain and Mexico, 1776-1846*. (Draft) United States Department of the Interior, National Park Service, Denver Service Center.
- LeeDecker, Charles H., Terry H. Klein, Cheryl A. Holt, and Amy Friedlander
- 1987 Nineteenth-Century Households and Consumer Behavior in Wilmington, Delaware. In *Consumer Choice in Historical Archaeology*, edited by Suzanne M. Spencer-Wood, pp. 233-259. Plenum Press, New York.
- Levy, R.
- 1978 Costanoan. In *California*, edited by R. F. Heizer, pp. 485-495. Handbook of North American Indians, vol. 8. Smithsonian Institution, Washington, D.C.
- Lewis, Oscar (Compiler and Editor)
- 1962 *This Was San Francisco: Being First-Hand Accounts of the Evolution of one of America's Favorite Cities*. David McKay, New York.
- Lewis Publishing Company
- 1892 *The Bay of San Francisco, The Metropolis of the Pacific Coast, and its Suburban Cities*. Lewis, Chicago.
- Light, John
- 1984 The Archaeology of Blacksmith Shops. *IA: The Journal of the Society for Industrial Archaeology* 10(1):55-68.
- Light, John, and Henry Unglik
- 1984 *A Frontier Fur Trade Blacksmith Shop, 1796-1812*. Parks Canada, Ottawa.
- Lightfoot, K. G., R. Kalin, and J. Moore
- 1987 *Prehistoric Hunter-Gathers of Shelter Island, New York: An Archaeological Study of the Mashmomack Preserve*. Contributions of the University of California Archaeological Research Facility No. 46. Department of Anthropology, University of California, Berkeley.
- Livingston, S. D.
- 1989 The Taphonomic Interpretation of Avian Skeletal Part Frequencies. *Journal of Archaeological Science* 16:537-547.
- Lloyd, B. E.
- 1876 *Lights and Shades in San Francisco*. A. L. Bancroft, San Francisco.
- Lockwood, Charles
- 1978 *Suddenly San Francisco: The Early Years of an Instant City. A California Living Book*. The San Francisco Examiner, San Francisco.
 - 1979 Rincon Hill Was San Francisco's Most Genteel Neighborhood. *California Historical Society Quarterly* LVIII.
- Lotchin, Roger W.
- 1974 *San Francisco: 1846-1856. From Hamlet to City*. Oxford University Press, New York.

- Loud, L. L.
- 1912a Field notes on the Presidio Mound #417. Ms. 362 on file, Archaeological Research Facility, Department of Anthropology, University of California, Berkeley, and on file, S-3250, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1912b Archaeological Site Record for CA-SFR-6. Ms. on file, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.
- Lyman, R. Lee
- 1977 Analysis of Historic Faunal Remains. *Historical Archaeology* 11:67-73.
- 1979 Available Meat From Faunal Remains: A Consideration of Techniques. *American Antiquity* 44:536-546.
- 1982 Archaeofaunas and Subsistence Studies. In *Advances in Archaeological Method and Theory*, vol. 5, edited by Michael B. Schiffer, pp. 331-393. Academic Press, New York.
- 1987a Zooarchaeology and Taphonomy: A General Consideration. *Journal of Ethnobiology* 7:93-117.
- 1987b Archaeofaunas and Butchery Studies: A Taphonomic Perspective. In *Advances in Archaeological Method and Theory*, vol. 10, edited by Michael B. Schiffer, pp. 249-337. Academic Press, Orlando, Florida.
- 1987c On the Analysis of Vertebrate Mortality Profiles: Sample Size, Mortality Type, and Hunting Pressure. *American Antiquity* 52:125-142.
- 1987d On Zooarchaeological Measures of Socioeconomic Position and Cost-Efficient Meat Purchases. *Historical Archaeology* 21(1):58-66.
- 1992 Anatomical Considerations of Utility Curves in Zooarchaeology. *Journal of Archaeological Science* 19:7-22.
- Lyman, R. Lee, and Gregory L. Fox
- 1989 A Critical Evaluation of Bone Weathering as an Indication of Bone Assemblage Formation. *Journal of Archaeological Science* 16:293-317.
- Majewski, Teresita
- 1987 *Social Status and Economic Patterning in the Central Salt River Valley of Northeastern Missouri during the Nineteenth and Early Twentieth Centuries*. Ph.D. dissertation, Department of Anthropology, University of Missouri. University Microfilm, Ann Arbor.
- Majewski, Teresita, and Michael J. O'Brien
- 1987 The Use and Misuse of Nineteenth-Century English and American Ceramics in Archaeological Analysis. In *Advances in Archaeological Method and Theory*, vol. 11, edited by Michael B. Schiffer, pp. 97-209. Academic Press, New York.
- Malloch, Neil
- 1970 Archaeological Site Record for CA-SFR-33H. (Recovery of Old Ship parts from Transamerica Excavation Site). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Maltby, J. M.
- 1985 Patterns in Faunal Assemblage Variability. In *Beyond Domestication in Prehistoric Europe: Investigations in Subsistence Archaeology and Social Complexity*, edited by G. Barker and C. Gamble, pp. 33-74. Academic Press, London, England.
- Maniery, Mary L., and Julia G. Costello
- 1986 Celadons and Sake Bottles: Asian History Underground. *Pacific Historian* 30(4):36-47.
- Marean, Curtis W., and Lillian M. Spencer
- 1991 Impact of Carnivore Ravaging on Zooarchaeological Measures of Element Abundance. *American Antiquity* 56:645-658.
- Margolin, Malcolm
- 1978 *The Ohlone Way: Indian Life in the San Francisco-Monterey Bay Area*. Heyday Books, Berkeley.
- Marshall, F., and T. Pilgram
- 1991 Meat Versus Within Bone Nutrients: Another Look at the Meaning of Body Part Representation in Archaeological Sites. *Journal of Archaeological Science* 18:149-163.
- Mason Tillman Associates
- 1986 *Cultural Resource Evaluation for 600 California Street (Federal Home Loan Bank Building)*. Office of Environmental Review, Department of City Planning, City and County of San Francisco. Ms. on file, S-9704, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Mayfield, D. W.
- 1978 *Ecology of the Pre-Spanish San Francisco Bay Area*. Unpublished Master's thesis, Department of Anthropology, San Francisco State University. Ms. on file, S-9583, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.
- McArdle, Sister Mary Aurelia
- 1954 *California's Pioneer Sister of Mercy: Mother Mary Baptist Russell*. Academy Library Guild, Fresno, California.
- McArdle, Rose, S. M. [Sister Mary Aurelia]
- 1979 *Mercy Undaunted. 125 Years in California*. Sisters of Mercy, Burlingame, California.

McCoy, Esther

- 1973 National Register of Historic Places Registration Form for United States Custom House. Ms. on file, E-33/S-3205, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

McGregor, T.

- 1980 Archaeological Site Record for CA-SFR-96H (Rincon Annex United States Post Office). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

McGuire, Pamela

- 1977 National Register of Historic Places Registration Form for Union Ferry Depot Building (CA-SFR-55H). Ms. on file, E-34/S-3206, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1978 National Register of Historic Places Registration Form for Ferry Station Post Office Building (CA-SFR-61H). Ms. on file, E-40/S-3212, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

McGuire, Randall H.

- 1982 The Study of Ethnicity in Historical Archeology. *Journal of Anthropological Archeology* 1:159-178.

Mc Ilroy, Jack.

- 1988 *An Archaeological Survey of the Asian Quarter of Cossack*. Australian Heritage Commission, Perth.
- 1993 Auger Program Results for the SF-480 Terminal Separation Rebuild. Anthropological Studies Center, Sonoma State University, Rohnert Park, California.

McKee, Larry W.

- 1987 Delineating Ethnicity from the Garbage of Early Virginians: Faunal Remains from the Kingsmill Plantation Slave Quarter. *American Archaeology* 6(1):31-39.

McKee, Larry W., and Paul E. Langenwalter, II

- 1985 Vertebrate Faunal Remains from the Kiln. In *Excavations at Mission San Antonio 1976-1978*, edited by Robert L. Hoover and Julia G. Costello, pp. 146-151. Monograph No. 26. Institute of Archaeology, University of California, Los Angeles.

Mead, Ralph A.

- 1970a National Register of Historic Places Registration Form for Main Post Office and District Court of Appeals Building (CA-SFR-42H) Ms. on file, S-3192, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

- 1970b Archaeological Site Record for CA-SFR-42H (Main Post Office and District Court of Appeals Building). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

- 1970c National Register of Historic Places Registration Form for Hallidie Building (CA-SFR-49H). Ms. on file, E-28/S-3200, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

- 1971 National Register of Historic Places Registration Form for Jackson Square Historic District (CA-SFR-52H). Ms. on file, E-31/S-3203, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Mellon, Knox

- 1977 National Register of Historic Places Registration Form for International Hotel (CA-SFR-47H). Ms. on file, S-3198, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Metcalf, Duncan, and Kevin T. Jones

- 1988 A Reconsideration of Animal Body-Part Utility Indices. *American Antiquity* 53:486-504.

Michael, Edward N.

- n.d. Archaeological Site Record for CA-SFR-40H (Mills Building and Tower). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1974 Mills Building and Tower (CA-SFR-40H). Ms. on file, E-7/S-3190, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Miller, A. H., and F. E. Peabody

- 1941 An Additional Pleistocene Occurrence of the Murre, *Uria aalge*. *Condor* 43(1):78.

Miller, George L.

- 1980 Classification and Economic Scaling of 19th Century Ceramics. *Historical Archaeology* 14:1-40.
- 1984 Marketing Ceramics in North American: An Introduction. *Winterthur Portfolio* 19(1):37-52.
- 1991 A Revised Set of CC Index Values for Classification and Economic Scaling of English Ceramics from 1787 to 1880. *Historical Archaeology* 25(1):1-25.

Miller, George L., and Silas D. Hurry

- 1983 Ceramic Supply in an Economically Isolated Frontier Community: Portage County of the Ohio Western Reserve, 1800-1825. *Historical Archaeology* 17(2):80-93.

Miller, George L., and Ann Smart Martin

- 1989 English Ceramics in America. In *Decorative Arts and Household Furnishings in American 1650-1920: An Annotated Bibliography*, edited by Kenneth L. Ames and Gerald W. R. Ward, pp. 201-219. Winterthur Museum, Winterthur, Delaware.

Miller, George L., Ann Smart Martin, and Nancy S. Dickinson

- 1992 Changing Consumption Patterns, English Ceramics and the American Market from 1770 to 1840. In *Life in the Early Republic 1789-1828*, edited by Catherine E. Hutchins. 29th Winterthur Conference, in press.

Miller, H. M.

- 1979 Pettus and Utopia: A Comparison of the Faunal Remains from Two Late Seventeenth Century Households. *Conference on Historic Sites Archaeology Papers* (1978) 13:158-179.

Miller, Naomi F.

- 1988 The Analysis of Archaeological Plant Remains. In *Archaeobotanical Results from the 1987 Excavation at Morven, Princeton, New Jersey*, edited by Naomi F. Miller and Anne Yentsch, pp. 27-45. Morven Interim Report No. 2. Ms. on file, New Jersey State Museum, Trenton, New Jersey.
- 1989 Survey and Bibliography of Ethnobotanical Studies in Historical Archaeology. Ms. on file, Museum Applied Science Center, University Museum, University of Pennsylvania, Philadelphia, Pennsylvania.

Milliken, R. T.

- 1983 *The Spatial Organization of Human Population on Central California's San Francisco Peninsula at the Spanish Arrival*. Unpublished Master's thesis, Sonoma State University. Ms. on file, S-9580, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.

Moore, Wilbert E.

- 1965 *The Impact of Industry*. Prentice-Hall, Englewood Cliffs, New Jersey.

Moran, Geoffrey

- 1980 *Historic Structure Report, Central Wharf, Archaeological Data Section*. National Park Service, Denver.

Moratto, Michael J.

- 1984 *California Archaeology*. Academic Press, Orlando, Florida.

Moratto, Michael J., and R. Hegler

- 1972 Archaeological Site Record for CA-SFR-26. Ms. on file, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.

Morey, Darcy F., and Walter E. Klippel

- 1991 Canid Scavenging and Deer Bone Survivorship at an Archaic Period Site in Tennessee. *Archaeozoologica* 4(1):11-28.

Morgan, Sally

- 1990 Letter Report Regarding Findings of Cultural Resources Evaluations of 77 Dow Place Site, San Francisco, California. Dated 5 October 1990. (Includes Shoup 1990, records search, and field survey). Submitted to Mr. Grey LeBon, Taisei Construction Corporation, San Francisco, California. Ms. on file, S-12187, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Morlan, Richard E.

- 1983 Counts and Estimates of Taxonomic Abundance in Faunal Remains: Microtine Rodents from Bluefish Cave I. *Canadian Journal of Archaeology* 7(1):61-76.

Mrozowski, Stephen A.

- 1983 Examining the Urban Environment Through the Analysis of Floral Remains. *The Newsletter of the Conference on New England Archaeology* 3(2):31-50.
- 1987 Exploring New England's Evolving Urban Landscape. In *Living in Cities: Current Research in Urban Archaeology*, edited by Edward Staski, pp. 1-9. The Society for Historical Archaeology Special Publication Series No. 5.
- 1991 Landscapes of Inequality. In *The Archaeology of Inequality*, edited by Randall H. McGuire and Robert Paynter, pp. 79-101. Basil Blackwell, Oxford.

Nations Groundwater Association

- 1992 Site Investigation Report 480 Terminal Separation, San Francisco, California. Report prepared for California Department of Transportation.

Murdoch, J., and R. W. Webb

- 1966 Minerals of California: Centennial Volume (1866-1966). *California Division of Mines and Geology Bulletin* 189. San Francisco.

Nelson, N. C.

- n.d. Series of Quads Around San Francisco Bay - probably used by N. C. Nelson (9 maps). Manuscript Map #105, University of California Archaeological Survey Files, Berkeley.
- 1909 Shellmounds of the San Francisco Bay Region. *University of California Publication in American Archaeology and Ethnology* 7(4):309-356.
- 1910a Field Notes on the Bayshore Mound #387. Ms. No. 355 on file, Archaeological Research Facility, Department of Anthropology, University of California, Berkeley.

- 1910b Ellis Landing. *University of California Publications in American Archaeology and Ethnology* 7:357-426.
- 1910c Archaeological Site Record for CA-SFR-7 (Nelson #387; Crocker or Bayshore Mound). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- [1910] Site location map for Nelson's San Francisco Bay Region. Manuscript Map #35, University of California Archaeological Survey Files (As cited in *Reports of the University of California Archaeological Survey* 75:83).
- Neville, Amelia Ransome
n.d. Scrapbooks. San Francisco Clippings from 1856-1882. 39 vols. California Historical Society, San Francisco.
- New York Morning Star*
1849 New York Morning Star, 16 January 1849.
- Nichols, P.
1979 Archaeological Site Record for CA-SFR-19 (Nelson #431). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Noel Hume, Ivor
1969 *Historical Archaeology*. Alfred A. Knopf, New York.
- Norman, Joseph Gary
1987 *Eighteenth-Century Wharf Construction in Baltimore Maryland*. Unpublished Master's thesis, College of William and Mary.
- O'Brien, Michael J., and Teresita Majewski
1989 Wealth and Status in the Upper South Socioeconomic System of Northeastern Missouri. *Historical Archaeology* 23(2):60-95.
- O'Connell, James F., Kristen Hawkes, and Nicholas B. Jones
1988 Hadza Hunting, Butchering, and Bone Transport and their Archaeological Implications. *Journal of Anthropological Research* 44:113-161.
1990 Reanalysis of Large Mammal Body Part Transport among the Hadza. *Journal of Archaeological Science* 17:301-316.
- O'Connell, James F., and Brendan Marshall
1989 Analysis of Kangaroo Body Part Transport among the Alyawara of Central Australia. *Journal of Archaeological Science* 16:393-405.
- Olmsted, Nancy
1986 *Vanished Waters: A History of San Francisco's Mission Bay*. Mission Creek Conservancy, San Francisco.
- 1991 *Guide to Historic Research in San Francisco as an Archaeological Aid for Project SF-480 Terminal Separation Rebuild Postmiles: 0.0/0.7, 04220- 190751*. Prepared for CALTRANS, District 4, San Francisco, California.
- Olmsted, Roger R.
1977a *Channel Outfalls Consolidation: Initial Report on Cultural Resources, Contracts C-1 and C-4*. Submitted to San Francisco Wastewater Management Program.
1977b *Channel Outfalls Consolidation: Revised Report on Cultural Resources, Contracts C-1 and C-4*. Submitted to San Francisco Wastewater Management Program.
1988 *Scow Schooners of San Francisco Bay*. California History Center Local History Studies Volume 33. Cupertino, California.
- Olmsted, Roger R., and Nancy L. Olmsted
1978 *Preliminary Survey of Historical Cultural Resources Northeastern Waterfront*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
1979 *Ocean Beach Study: A Survey of Historic Maps and Photographs*. Submitted to San Francisco Wastewater Management Program. (As cited in Pastron, Prichett, and Ziebarth 1981).
1980a National Register of Historic Places Registration Form for The LYDIA (Register Number 14856, International Signal Code H.M.G.D, Archaeological Site #4-SFR-94H). Ms. on file, S-5375, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
1980b *Gold Rush Ship in Levi Plaza*. Ms. on file, State of Office of Historic Preservation in Sacramento and on file, S-3251, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Olmsted, Roger R., Nancy Olmsted, David A. Fredrickson, and V. Bente'
1982 *San Francisco Bayside: Historical Cultural Resource Survey*. Prepared for the San Francisco Clean Water Program by Resource Consultants. Ms. on file, S-6157, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Olmsted, Roger R., Nancy Olmsted, and Allen G. Pastron
1977a *San Francisco Waterfront: Report on Historical Cultural Resources*. Submitted to San Francisco Wastewater Management Program. Ms. on file, S-5380, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
1977b *Channel Outfalls Consolidation Project: Report on Cultural Resources of Contract Area C-2 (King Street)*. Ms. on file, S-8979, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

- 1977c *Channel Outfalls Consolidation Project: Report on Cultural Resources of Contract Area C-3*. Ms. on file, S-8980, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1977d *North Shore Outfalls Consolidation Project, Revised Report on Cultural Resources, Contract Areas N-3 and N-5*. Ms. on file, S-S-8945, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1977e *Report on the Pre-construction Archaeological Testing Program Conducted within the C-2 Contract Area of the Channel Outfalls Consolidation Project, City and County of San Francisco*. Submitted to the San Francisco Wastewater Management Program.
- 1977f *Yerba Buena Convention Center: Report on Historical Cultural Resources*. Environmental Science Associates, Inc.
- 1978a *Report on the Pre-construction Archaeological Testing Program Conducted within the N-3 Contract Area of the North Shore Outfalls Consolidation Project, San Francisco, California*. Submitted to the San Francisco Wastewater Management Program.
- 1978b *Report on the Pre-construction Archaeological Testing Program Conducted within the N-4 Contract Area of the North Shore Outfalls Consolidation Project*. Submitted to the San Francisco Wastewater Management Program.
- 1978c *Report on the Potential for Cultural Resources within the C-3 Contract Area of the Channel Outfalls Consolidation Project, City and County of San Francisco*. Submitted to the San Francisco Wastewater Management Program.
- 1978d *Levi's Plaza Environmental Impact Report. Appendix B. Historical and Archaeologic (sic) Resources*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1979a *Report on the Pre-construction Archaeological Testing Program Conducted within the N-1 Contract Area of the North Shore Outfalls Consolidation Program, San Francisco, California*. Submitted to the San Francisco Wastewater Management Program.
- 1979b *Report on the Pre-construction Archaeological Testing Program Conducted within the N-2 Contract Area of the North Shore Outfalls Consolidation Program, San Francisco, California*. Submitted to the San Francisco Wastewater Management Program.
- 1979c *Yerba Buena Center: The Edge of Rincon Hill. Archival Report on the Historical Cultural Resources of Eastern Block 3*. Prepared for the San Francisco Redevelopment Agency.
- 1979d *Yerba Buena Center: Historical Resource Survey of the YBC*. Prepared for the San Francisco Redevelopment Agency, San Francisco.
- Olmsted, Roger R., Nancy Olmsted, Allen G. Pastron, and Jack Prichett
1981 *Rincon de las Salinas y Potrero Viejo, the Vanished Corner: Historical Archaeological Program at the Southeast Treatment Plant*. San Francisco Clean Water Management Program. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- Olmsted, Roger R., Nancy Olmsted, Jack Prichett, and Allen G. Pastron
1981 *The King Street Ship*. In *Behind the Sea Wall: Historical Archaeology along the San Francisco Waterfront*, vol. 1, edited by Allen G. Pastron, Jack Prichett, and Marilyn Ziebarth, pp. 107-250. San Francisco Clean Water Program, San Francisco.
- Olmsted, Roger R., Nancy Olmsted, Alex R. Pridemore, Allen G. Pastron, Jack Prichett, John Kortum, Roger W. Olmsted, and Eve Livingston
1977 *The Yerba Buena Center: Report on Historical Cultural Resources*. November 4, 1977. Prepared for Environmental Science Associates, San Francisco.
1979 *The Yerba Buena Convention Center: Report on Historical Cultural Resources*. Prepared for the San Francisco Redevelopment Agency. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and Basin Research Associates, San Leandro, California.
- Olmsted, Roger R., and Thomas Watkins
1976 *Mirror of Dream: Illustrated History of San Francisco*. Scrimshaw Press, San Francisco.
- Olmsted, Roger W.
1992 *Tar Flat—19th Century Solutions, 20th Century Hazards. CAL-TRANS SF-480 Terminal Separation Rebuild. Study of Historic Potential Hazardous Materials Sites*. Prepared for the CALTRANS District 4, San Francisco, by Resource Consultants, Kentfield, California.
- Olsen, Sandra L.
1989 *On Distinguishing Natural from Cultural Damage on Archaeological Antler*. *Journal of Archaeological Science* 16:125-135.
- Olsen, Sandra L., and Pat Shipman
1988 *Surface Modification of Bone: Trampling Versus Butchery*. *Journal of Archaeological Science* 15:535-553.

Opsata, Margaret

- 1974 National Register of Historic Places Registration Form for Geary Theatre (CA-SFR-85H). Ms. on file, S-3218, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Orser, Charles E., Jr.

- 1990 Archaeological Approaches to New World Plantation Slavery. In *Archaeological Method and Theory*, vol. 2, edited by Michael B. Schiffer, pp. 111-154. University of Arizona Press, Tucson, Arizona.
- 1991 Unpublished manuscript on nineteenth century Patent Medicine Bottles. Ms. in possession of the author.

Ostrogorsky, Michael

- 1987 Economic Organization and Landscape: Physical and Social Terrain Alteration in Seattle. In *Living in Cities: Current Research in Urban Archeology*, edited by Edward Staski, pp. 10-18. Society for Historical Archeology Special Publication 5.

Otto, John S.

- 1980 Race and Class on Antebellum Plantations. In *Archaeological Perspectives on Ethnicity in America Afro-American and Asian American Culture History*, edited by Robert L. Schuyler, pp. 3-13. Baywood, Farmingdale, New York.
- 1984 *Cannon's Point Plantation, 1794-1860: Living Conditions and Status Patterns in the Old South*. Academic Press, New York.

Pacific Art Company

- 1904-1905 San Francisco, Her Great Manufacturing. Pacific Art Company, San Francisco.

Painter, J. B., Company

- 1895 *Langley's San Francisco Directory for the Year 1895*. J. B. Painter, San Francisco.

Palmer, Mrs. Silas H.

- 1935 *Vignettes of Early San Francisco Home and Gardens*. San Francisco Garden Club. San Francisco.

Parmalee, Paul W.

- 1985 Identification and Interpretation of Archaeologically Derived Animal Remains. In *The Analysis of Prehistoric Diets*, edited by R. I. Gilbert, Jr. and J. H. Mielke, pp. 61-95. Academic Press, Orlando, Florida.

Passmore, Robert

- 1991 Letter to Jim Morrison, Gerald D. Hines Interests, San Francisco. Regarding Treganza receipt of collections as part of compliance with archaeological conditions of approval CCPS Motion No. 11076 for 343 Sansome Street (Case Number 85.79E). Dated 29 March 1991. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco. (Block 239/2, 24, 27,28)

Pastron, Allen G.

- n.d.a. *Cultural Resources Evaluation of Five South of Market Parcels, San Francisco, California (100 First, 535 Mission, 524 Howard, 201 Second and 1 Second Streets)*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and S-9338, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- n.d.b. *Cultural Resources Evaluation of 505 Montgomery Street, San Francisco, California (CA-SFR-117H)*. Ms. on file, S-9336, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1977a *Report on the Pre-construction Archaeological Testing Program Conducted within the C-1 and C-4 Alignments of the Channel Outfalls Consolidation Program*. Submitted to the San Francisco Wastewater Management Program. Ms. on file, S-5383, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1977b *Report on the Pre-construction Archaeological Testing Program Conducted within the N-5 Contract Area of the North Shore Outfalls Consolidation Project*. Submitted to the San Francisco Wastewater Management Program.
- 1978 *Yerba Buena Convention Center: Pre-construction Archaeological Testing Program*. Submitted to George R. Moscone Convention Center Project Office, San Francisco (As cited in Archeo-Tec 1990b).
- 1982a Letter Report to Mr. Stu During, Environmental Impact Planning Corporation, San Francisco. Dated 8 July 1982. Regarding Embarcadero Terraces Development Project San Francisco. From Archeo-Tec. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1982b *Report of the Potential for Significant Cultural Resources within the Embarcadero Terraces Development Project*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1983a Letter Report to Mr. George Burwasser, Environmental Impact Planning Corporation, San Francisco. Regarding Cultural Resources Evaluation of the Property at 600 Harrison Street in San Francisco. Ms. on file, S-9317, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

- 1983b Letter Report to Ms. Ellie Ross, Environmental Impact Planning Corporation, San Francisco. Regarding Cultural Resources Evaluation of 501 Bryant Street, San Francisco. Ms. on file, S-9337, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1984a *Cultural Resources Evaluation of Hills Plaza, San Francisco, California* (Letter report). Ms. on file, S-9331, Rohnert Park.
- 1984b *Cultural Resources Evaluation of 235 Pine Street, San Francisco (CA-SFR-122H)*. Ms. on file, S-9333, California Archaeological Site Inventory, Rohnert Park and Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1985a *Cultural Resources Evaluation of the Fifth and Market Retail Office Complex, San Francisco California*. Submitted to Whisler-Patri, Inc., and the San Francisco Office of Environmental Review.
- 1985b *Rincon Point - South Beach Report on Historical Cultural Resources*. Prepared for San Francisco Redevelopment Agency. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1985c *Rincon Point - South Beach Cultural Resources Summary Information Handbook*. Prepared for San Francisco Redevelopment Agency. Ms. on file, S-9340 California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1985d Archaeological Site Record for CA-SFR-117H (505 Montgomery Street site). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1985e Archaeological Site Record for CA-SFR-118H (mostly Hoff's Store site). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986a Archaeological Site Record for CA-SFR-119H (100 First Plaza site). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986b Archaeological Site Record for CA-SFR-120H (Rincon Center). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1987a Supplement to Archaeological Site Record for CA-SFR-47H (former International Hotel). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1987b Archaeological Site Record for CA-SFR-116H (Rincon Point Fishing Village). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1987c *Cultural Resources Evaluation: Pan Magna Plaza Development Project, San Francisco, California*. Ms. on file, S-9334, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1988a Archaeological Site Record for CA-SFR-122H (235 Pine Street). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1988b William C. Hoff's Gold Rush Emporium: Bonanza from Old San Francisco. *Archaeology* 41(4):32-39.
- 1989 On Golden Mountain. *Archaeology* 42(4):48-53.
- 1990a Surprise Shell Mound (CA-SFR-114). *Archaeology* 43(1):26.
- 1990b Historical Background of the Hoff Store Site and an Overview of Gold Rush Archaeology in Downtown. In *The Hoff Store Site and Gold Rush Merchandise from San Francisco, California*, edited by Allen G. Pastron and Eugene M. Hattori, pp. 4-18. Society for Historical Archaeology Special Publication Series 7.
- 1990c *Rincon Point - South Beach Redevelopment Project Parcel E: The Bayside Village Site Archaeological Testing and Data Recovery Program (CA-SFR-116H)*. Ms. on file, the San Francisco Redevelopment Agency.
- 1990d *Archival Cultural Resources Evaluation of the Proposed Natoma Mews Project, San Francisco, California*. Prepared for Environmental Science Associates, San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1990e *524 Howard Street, San Francisco, California: Pre-construction Archaeological Testing Program*. Prepared for Anvil International Properties, San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1990f *869 Folsom Street, San Francisco California: Archival Cultural Resources Evaluation*. Prepared for Robert J. Fehrer, San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1990g *Archival Cultural Resources Evaluation of the Proposed Howard Street Development Project, San Francisco, California*. Prepared for ESA, San Francisco. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- 1991a Letter to Barbara Sahm, Environmental Review Officer, Office of Environmental Review, Department of City Planning, City and County of San Francisco. Dated 14 January 1991. Regarding artifacts of historical significance recovered at 524 Howard Street and direction to cease laboratory processing by Mr. Alexander L. Lui. From Archeo-Tec, Oakland.

- 1991b *Archival Cultural Resources Evaluation of the Proposed Main Library Development Project and Two Affiliated Parcels, San Francisco, California*. Ms. on file, Office of Environmental Review, Department of City Planning, San Francisco.
- Pastron, Allen G., and James P. Delgado
1991 Archaeological Investigations of a Mid-19th Century Shipbreaking Yard, San Francisco, California (CA-SFR-115H). *Historical Archaeology* 25(3):61-77.
- Pastron, Allen G., and Eugene M. Hattori (Editors)
1990 *The Hoff Store Site and Gold Rush Merchandise from San Francisco, California*. Society for Historical Archaeology Special Publication Series No. 7.
- Pastron, Allen G., Eugene M. Hattori, Michael Walsh, and James P. Delgado
1990 Some Observations and Concluding Remarks: The Hoff Store Site. In *The Hoff Store Site and Gold Rush Merchandise from San Francisco, California*, edited by Allen G. Pastron and Eugene M. Hattori, pp. 101-105. Society for Historical Archaeology Special Publication 7.
- Pastron, Allen G., Robert Gross, and Donna M. Garaventa
1981a Catalog of Chinese Ceramic Ware Collected at N-5. In *Behind the Seawall: Historical Archaeology Along the San Francisco Waterfront*, edited by Allen G. Pastron, J. Prichett and M. Ziebarth, vol. 3, pp. 653-682. San Francisco Clean Water Program, San Francisco.
- 1981b Ceramics from Chinatown's Tables: An Historical Archaeological Approach to Ethnicity. In *Behind the Seawall: Historical Archaeology Along the San Francisco Waterfront* edited by Allen G. Pastron, J. Prichett and M. Ziebarth, vol. 3, pp. 365-469. San Francisco Clean Water Program, San Francisco.
- Pastron, Allen G., and Jack Prichett
1979 *The Ship at Levi's Plaza: Archaeological Investigations on San Francisco's Northeastern Waterfront*. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and E-185/S-8305 or 8306, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1980 Gold Rush Hulks: Archaeology on a Grand Scale along San Francisco's Waterfront. Paper presented at the 13th annual meeting of the Society for Historical Archaeology, Albuquerque, New Mexico.
- 1981 *Up in Smoke: Clay Pipes and the Remains of a Gold Rush Warehouse along San Francisco's Northeast Waterfront*. Prepared for Blue Jeans Equities West. Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco and Possibly S-3248, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Pastron, Allen G., Jack Prichett, and Marilyn Ziebarth (Editors)
1981 *Behind the Sea Wall: Historical Archaeology along the San Francisco Waterfront*, 3 vols. San Francisco Clean Water Program, San Francisco.
- Pastron, Allen G., and Michael R. Walsh
1988a *The Stevenson Street Shellmound, CA-SFR-112: A Prehistoric Archaeological Site in Downtown San Francisco*. Prepared by Archeo-Tec, Oakland. Ms. on file, Lowie Museum of Anthropology, Berkeley.
- 1988b Archaeological Excavations at CA-SFR-112, The Stevenson Street Shellmound, San Francisco, California. *Archives of California Prehistory* 21. Coyote Press, Salinas, California.
- 1988c Archaeological Excavations at CA-SFR-113, The Market Street Shell Midden: A Prehistoric Archaeological Site, San Francisco, California. *Archives of California Prehistory* 25. Coyote Press, Salinas, California.
- 1988d Archaeological Site Record for CA-SFR-123H (600 California site). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Piperno, Dolores R.
1988a *Phytolith Analysis: An Archaeological and Geological Perspective*. Academic Press, San Diego, California.
- 1988b Phytoliths at Morven. In *Archaeobotanical Results from the 1987 Excavation at Morven, Princeton, New Jersey*, edited by Naomi F. Miller and Anne Yentsch, pp. 50-55. Historic Morven Interim Report 2. Trenton, New Jersey State Museum.
- Platt, Mrs. Bland
1978 National Register of Historic Places Registration Form for Rincon Annex (CA-SFR-96H). Ms. on file, E-76/S-3234, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Potter, L., and J. Rowley
1960 Pollen and Vegetation, San Augustine Plains, New Mexico. *The Botanical Gazette* 173(1):1-25.
- Powers, D. W. III, and Randolph S. Delehanty
1975 National Register of Historic Places Registration Form for Fitzhugh Building (CA-SFR-51H). Ms. on file, S-3202, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Praetzellis, Adrian
1991a *The Archaeology of a Victorian City: Sacramento California*. Ph.D. dissertation, Department of Anthropology, University of California, Berkeley. University Microfilms, Ann Arbor.

- 1991b *Preliminary Statement of Historic Archaeological Sensitivity: Terminal Separation Rebuild, SF-480 0.0/0.7 04220-190751 San Francisco, California*. Prepared for Janet Pape, Environmental Branch "A," CALTRANS District 4, San Francisco.
- 1992 Preliminary letter report, dated 23 April 1992, to Mara Melandry, Environmental Branch "A", CALTRANS, District 4, regarding archaeological evaluation investigations at the St. Mary's Hospital site, on Rincon Hill, San Francisco as part of the SF-480 Terminal Separation Rebuild project. Contract No. 220-191711, 190751.
- Praetzellis, Adrian, and Susan H. Alvarez
- 1992 *Archaeological Research Design and Procedural Plan for the Shaft Lateral Load Test, Rincon Street, San Francisco*. Prepared for Mara Melandry, Environmental Branch "A". CALTRANS, District 4, San Francisco, as part of the SF-480 Terminal Separation Rebuild project. Contract No. 220-191711, 190751.
- Praetzellis, Adrian, and Mary Praetzellis
- 1992 *Faces and Facades: Victorian Ideology in Early Sacramento*. In *The Art and Mystery of Historical Archaeology: Essays in Honor of James Deetz*, edited by Anne Yentsch and Mary C. Beaudry, pp. 75-99. CRC Press, Boca Raton, Florida.
- Praetzellis, Adrian, Mary Praetzellis, and Marley Brown, III
- 1987 *Artifacts as Symbols of Identity: An Example from Sacramento's Gold Rush Era Chinese Community*. In *Living in Cities: Current Research in Urban Archaeology*, edited by Edward Staski, pp. 38-47. The Society for Historical Archaeology Special Publication Series No. 5.
- Praetzellis, Mary
- 1986 *Archeology in Sacramento, California*. In *Cities and Archeology: Research*, compiled by Pamela J. Cressey and Belinda Blomberg. Alexandria Archeology, Alexandria, Virginia.
- Praetzellis, Mary, and Adrian Praetzellis
- 1980 *The Old West in a New Light*. *Early Man*. Summer 1980:13-16.
- 1981 *Test Excavation and Research Strategy for the IJ56 Block: Early Chinese Merchant Community in Sacramento, California*. Ms. on file, Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1982 *Archeological and Historical Studies of the IJ56 Block, Sacramento California: An Early Chinese Community*. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1983 *The Contents of Mrs. Menefee's Well: Possibilities for the Archaeological Study of Family Life*. *Pacific Coast Archaeological Society Quarterly* 19(1):27-37.
- 1988 *Archaeological Research Design and Testing Strategy for the IJ56 Block*. Prepared for Sacramento Housing and Redevelopment Agency and McKuen Properties.
- 1989a *Carriage Maker to Undertaker or the Redmonds Clean House: Archaeology of an 1870s Family*. M. & A. Praetzellis, Santa Rosa, California.
- 1989b *Archaeological Research Design and Testing Strategy for Part of Block J/K/12/13, Sacramento*. Prepared for Lankford & Cook.
- 1990a *The Mary Collins Assemblage: Mass Marketing and the Archaeology of a Sacramento Family*. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1990b *Junk!: Archaeology of the Pioneer Junk Store, 1877-1908*. Papers in Northern California Anthropology No. 4. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1990c *"For A Good Boy": Victorians on Sacramento's J Street*. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1990d *Archaeological and Historical Studies of the San Fong Chong Laundry, 814 I Street, Sacramento*. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1992 *"We Were There, Too": Archaeology of an African-American Family in Sacramento, California*. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- Praetzellis, Mary, Adrian Praetzellis, and Marley R. Brown III
- 1988 *What Happened to the Silent Majority? Research Strategies for Studying Dominant Group Material Culture in Late 19th-Century California*. In *Documentary Archaeology in the New World*, edited by Mary C. Beaudry, pp. 192-202. Cambridge University Press, Cambridge, England.
- Praetzellis, Mary, Adrian Praetzellis, and Marley R. Brown III (Editors)
- 1980 *Historical Archaeology at the Golden Eagle Site*. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park.
- Price, Cynthia
- 1985 *Patterns of Cultural Behavior and Intra-Site Distributions of Faunal Remains at the Widow Harris Site*. *Historical Archaeology* 19(2):40-56.

Prichett, Jack

- 1980 Archaeological Site Record for CA-SFR-94H ("Old Whaling Bark" *Lydia*). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Rackham, James

- 1983 Faunal Sample to Subsistence Economy: Some Problems in Reconstruction. In *Integrating the Subsistence Economy*, edited by M. Jones, pp. 251-277. British Archaeological Reports International Series No. 181.

Ramsey, Eleanor M., and Virginia Geddes

- 1985 *Rincon Point - South Beach Redevelopment Project: Oral History Report*. Prepared for San Francisco Redevelopment Agency. Mason Tillman Associates. Ms. on file, S-3243, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Randall, P. M. (Compiler)

- 1881 Golden State and Miners' Annual Circular. San Francisco.

Reed, Charles

- 1976 *Historical Archaeological Investigation in San Francisco, Corner of Market and Fremont*. Ms. on file, E-4/S-3178, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Reitz, Elizabeth J.

- 1985a Sixteenth Century Spanish Subsistence at St. Augustine, Florida. *The Florida Anthropologist* 38(1-2):54-69.
- 1985b Comparison of Spanish and Aboriginal Subsistence on the Atlantic Coastal Plain. *Southeastern Archaeology* 4(1):41-50.
- 1986 Urban/Rural Contrasts in Vertebrate Fauna from the Southern Atlantic Coastal Plain. *Historical Archaeology* 20(2):47-58.
- 1987 Vertebrate Fauna and Socioeconomic Status. In *Consumer Choice in Historical Archaeology*, edited by Suzanne M. Spencer-Wood, pp. 101-119. Plenum Press, New York.

Reitz, Elizabeth J., and Dan Cordier

- 1983 Use of Allometry in Zooarchaeological Analysis. In *Animals and Archaeology: 2. Shell Middens, Fishes, and Birds*, edited by C. Grigson and J. Clutton-Brock, pp. 237-252. British Archaeological Reports International Series No. 183.

Reitz, Elizabeth J., and Stephen L. Cumbaa

- 1983 Diet and Foodways of Eighteenth-Century Spanish St. Augustine. In *Spanish St. Augustine: The Archaeology of a Colonial Creole Community*, edited by Kathleen Deagan, pp. 151-185. Academic Press, New York.

Reitz, Elizabeth J., Tyson Gibbs, and Ted A. Rathburn

- 1985 Archaeological Evidence for Subsistence on Coastal Plantations. In *The Archaeology of Slavery and Plantation Life*, edited by T. A. Singleton, pp. 163-191. Academic Press, Orlando, Florida.

Reitz, Elizabeth J., and Nicholas Honerkamp

- 1983 British Colonial Subsistence Strategy on the Southeastern Coastal Plain. *Historical Archaeology* 17:4-26.

Reitz, Elizabeth J., Irvy R. Quitmyer, H. Stephen Hale, Sylvia J. Scudder, and Elizabeth S. Wing

- 1987 Application of Allometry to Zooarchaeology. *American Antiquity* 52:304-317.

Reitz, Elizabeth J., and C. Margaret Scarry

- 1985 *Reconstructing Historic Subsistence With an Example from Sixteen-Century Spanish Florida*. The Society for Historical Archaeology Special Publication Series No. 3.

Ricketts E., and J. Calvin

- 1968 *Between Pacific Tides*. Stanford University Press, Stanford.

Risdon Iron Works

- v.d. Miscellaneous papers of the Risdon Iron Works. On file, Bancroft Library, University of California, Berkeley.

Robbins, Roland, and Evan Jones

- 1959 *Hidden America*. Knopf, New York.

Robertson, A. M.

- 1880-1932 Miscellaneous papers. (Private collection).

Rockman, Diana

- 1982 *An Archaeological Investigation of the Telco Block, New York, New York*. Ms. report on file, Soil Systems, Inc., Marietta, Georgia.

Rockman, Diana diZerega, and Nan Rothschild

- 1984 City Tavern, Country Tavern: An Analysis of Four Colonial Sites. *Historical Archaeology* 18:112-121.

Rojos, Alfonso

- 1986 Live Length and Weight of Cod (*Gadus morhua*) Estimated from Various Skeletal Elements. *North American Archaeologist* 7:329-351.

Roney, Frank

- 1875-76 Diary of Life in San Francisco During 1875 and 1876. Frank Roney Papers. Ms. on file, Bancroft Library, University of California, Berkeley.

- Ross, Elizabeth Dale
1976 *The Kindergarten Crusade: The Establishment of Preschool Education in the United States*. Ohio University Press, Athens, Ohio.
- Rothschild, Nan A.
1990 *New York City Neighborhoods: The Eighteenth Century*. Academic Press, San Diego.
- Rovner, Irwin
1990 Fine-Tuning Floral History with Plant Opal Phytolith Analysis. In *Earth Patterns: Essays in Landscape Archaeology*, edited by William Kelso and Rachel Most, pp. 297-308. University of Virginia Press, Charlottesville, Virginia.
- Roxburgh, James H.
1926 Memories of the Past. *South of Market Journal* (November). San Francisco.
1929a Third Street. *South of Market Journal* (July). San Francisco.
1929b The Apprentice System. *South of Market Journal* (October). San Francisco.
1933 Tar Flat Recollections. *South of Market Journal* (October). San Francisco.
- Roxburgh, James H., and W. H. Whettig
1927 Boarding Houses and Hotels. *South of Market Journal*. San Francisco.
- Rudo, Mark Ogden
1982 *The Prehistory of San Francisco*. Unpublished Master's thesis, Department of Anthropology, San Francisco State University. Ms. on file, S-6160, California Archaeological Inventory, Northwest Information Center, Rohnert Park, California.
- Rutsch, Edward, William Sandy, and Patricia Condell
1988 *Archaeological Cultural Resources Survey of the NJDOT's Proposed Route 21 Alignments in Passaic County, New Jersey*. Prepared by Historic Conservation and Interpretation, Inc., Newton, New Jersey.
- Sale, Roger
1982 *Seattle Past to Present*. University of Washington Press, Seattle.
- Salls, Roy A.
1989 The Fisheries of Mission Nuestra Senora de la Soledad, Monterey County, California. *Research in Economic Anthropology* 11:251-284.
- San Francisco, City and County
1991 Preservation: An Element of the Master Plan of the City and County of San Francisco. (Working Draft, November) Including Appendix A to Article 10, List of Designated Landmarks and Appendix B San Francisco Designated Historic Districts. Secretary to the Landmarks Preservation Advisory Board, City and County of San Francisco, Department of City Planning.
- San Francisco, City and County, Office of Environmental Review, Department of City Planning
1991 List of Certified EIRS Through September 1989. (Typewritten with annotations through 25 July 1991). Ms. on file, Office of Environmental Review, Department of City Planning, City and County of San Francisco.
- San Francisco Daily Herald*
1851a *San Francisco Daily Herald*, 20 June 1851.
1851b *San Francisco Daily Herald*, 19 August 1851.
- San Francisco Department of Public Works
1920-23 Annual Report of the Bureau of Engineering of the Department of Public Works, City and County of San Francisco.
- San Francisco Evening Picayune*
1851 *San Francisco Evening Picayune*, 16 April 1851.
- San Francisco Examiner*
1891 *San Francisco Examiner*, 31 August 1891.
- San Francisco Maritime Museum
1963 Gold Rush Vessels Beached, Scuttled and Broken Up. Ms. on file, Library of the National Maritime Museum, San Francisco.
- Scanland, J. M.
1895 Evolution of Shipping and Ship-building in California. *Overland Monthly*. January, February, and March.
- Schiffer, Michael B.
1987 *Formation Processes of the Archaeological Record*. University of New Mexico Press, Albuquerque.
- Schlocker, J.
1974 Geology of the San Francisco North Quadrangle, California. *U.S. Geological Survey Professional Paper* 782. Washington, D.C.
- Schoenwetter, J.
1962 A Late Post-Glacial Pollen Chronology from the Central Mississippi Valley. *Pollen et Spores* 4:376.

- 1974 Pollen Analysis of Human Paleofeces from Upper Salts Cave. In *Archaeology of the Mammoth Cave Area*, edited by Patty Jo Watson, pp. 49-105. Academic Press, New York.
- Schulz, Peter D.
- 1979a Historical Faunal Remains from Panamint City: Notes on Status and Diet in a California Boom Town. *Pacific Coast Archaeological Society Quarterly* 15(4):55-63.
- 1979b *Research Design for Historical Archeology on the J/K/L/6/7 Block, Sacramento*. Ms. on file, Sacramento Museum and History Department, Sacramento, California.
- 1980 Fish Remains. In *Historical Archaeology at the Golden Eagle Site*, edited by Mary Praetzelis, Adrian Praetzelis, and Marley R. Brown, III, pp. 2-1 to 2-18. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1981 *Osteoarchaeology and Subsistence Change in Prehistoric Central California*. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Davis, California.
- 1982a Sacramento: Urbanism in the Pacific West. *North American Archaeologist* 3:243-257.
- 1982b Fish, Reptile, and Cephalopod Remains. In *Archaeological and Historical Studies of the IJ56 Block, Sacramento, California: An Early Chinese Community*, edited by Mary Praetzelis and Adrian Praetzelis, pp. 74-86. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1984 Nineteenth Century Fish Remains from Woodland, California. In *The Chinese Laundry on Second Street: Papers on Archeology at the Woodland Opera House Site*, edited by David L. Felton, R. Lortie, and Peter D. Schulz, pp. 158-166. California Department of Parks and Recreation, Cultural Resource Management Unit, California Archeological Reports No. 24.
- 1987 Archaeological Evidence for Early Bone Lime Production in Old Town San Diego. *Pacific Coast Archaeological Society Quarterly* 23(2):52-58.
- Schulz, Peter D., and Sherri M. Gust
- 1983a Faunal Remains and Social Status in 19th Century Sacramento. *Historical Archaeology* 17(1):44-53.
- 1983b Relative Beef Cut Prices in the Late Nineteenth Century: A Note for Historic Site Faunal Analysis. *Pacific Coast Archaeological Society Quarterly* 19(1):12-18.
- Schulz, Peter D., Ronald Quinn, and Scott Fulmer
- 1987 Archaeological Investigations at the Rose-Robinson Site: Old Town San Diego. *Pacific Coast Archaeological Society Quarterly* 23(2):1-51.
- Schuyler, Robert L. (Editor)
- 1980 *Archaeological Perspectives on Ethnicity in America: Afro-American and Asian American Culture History*, Baywood, Farmingdale, New York.
- Schwendinger, Robert J.
- 1984 *International Port of Call: An Illustrated Maritime History of the Golden Gate*. Windsor Publications, Woodland Hills, California.
- Scott, Mel
- 1959 *The San Francisco Bay Area: A Metropolis in Perspective*. University of California Press, Berkeley.
- Shaffer, Brian S.
- 1992 Quarter-Inch Screening: Understanding Biases in Recovery of Vertebrate Faunal Remains. *American Antiquity* 57:129-136.
- Sharp, John
- 1900 *Modern Foundry Practice*. E. & F. Spon, London.
- Sheridan, Sister Mary Athanasius
- 1982 *...And Some Fell on Good Ground: A History of the Sisters of Mercy of California and Arizona*. Carlton Press, New York.
- Shoup, Laurence H.
- 1990 *Historical Overview of the 77 Dow Place Site, San Francisco, California*. Ms. on file, S-12188, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Shoup, Laurence H., and Suzanne Baker
- 1981 *Cultural Resource Overview: Lake Merced Transport, San Francisco, Clean Water Management Program, San Francisco, California*. Ms. on file, S-4899, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Shumate, Albert
- 1988 *Rincon Hill and South Park*. Wingate Press, Sausalito, California.
- Shumsky, Neil Larry
- 1972 *Tar Flat and Nob Hill: A Social History of Industrial San Francisco during the 1870's*. Unpublished Ph.D. dissertation, Department of History, University of California, Berkeley.

Simons, Dwight D.

- 1980 Bird Remains. In *Historical Archaeology at the Golden Eagle Site*, edited by Mary Praetzelis, Adrian Praetzelis, and Marley R. Brown, III, pp. 1-1 to 1-12. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1982 *Nineteenth-Century Bird Remains from Old Sacramento: Perspectives on Market Hunting and the Rise of the Domestic Poultry Industry*. Ms. on file, California Department of Parks and Recreation, Cultural Resource Management Unit, Sacramento, California.
- 1984 Avifaunal Remains at the Woodland Opera House Site. In *The Chinese Laundry on Second Street: Papers on Archeology at the Woodland Opera House Site*, edited by David L. Felton, R. Lortie, and Peter D. Schulz, pp. 167-180. California Archeological Reports No. 24. California Department of Parks and Recreation, Cultural Resource Management Unit.
- 1987 Appendix 2: Animal Remains from Four Archaeological Sites in the Knoxville Area. In *Prehistoric Archaeology of the Knoxville Locality*, edited by A. Bramlette and David A. Fredrickson, pp. 325-330. Cultural Resources Facility, Anthropological Studies Center, Sonoma State University, Rohnert Park, California.
- 1989 Bird and Mammal Remains from the Day's Inn Site, Sonoma County, California. In *Carriage Maker to Undertaker or the Redmonds Clean House: Archaeology of an 1870s Family*, edited by Mary Praetzelis and Adrian Praetzelis, Appendix B, pp. 1-10. M. & A. Praetzelis, Santa Rosa, California.
- 1990a Vertebrate Remains from the Albion Sites. In *Western Pomo Prehistory: Excavations at Albion Head, Nightbirds' Retreat, and Three Chop Village, Mendocino County, California*, edited by T. N. Layton, pp. 37-51. Monograph No. 32. Institute of Archaeology, University of California, Los Angeles.
- 1990b Prehistoric Patterns of Mammalian Exploitation Around San Francisco Bay. Paper Presented at the 24th Annual Meeting, Society for California Archaeology, Foster City, California.

Simons, Dwight D., and Sherri M. Gust

- 1985 Appendix D: Fauna. In *Report of Phase III Research for Block 1, San Antonio Plaza, San Jose*, edited by David A. Fredrickson and V. Bente', pp. D-1 to D-63. Ms. on file, The Redevelopment Agency, City of San Jose, San Jose, California.

Simons, Dwight D., and James P. Quinn

- 1990 Prehistoric Mammalian Exploitation in Central Contra Costa County, California. Paper Presented at the 24th Annual Meeting, Society for California Archaeology, Foster City, California.

Singer, David A.

- 1985 The Use of Fish Remains as a Socio-Economic Measure: An Example from 19th Century New England. *Historical Archaeology* 19(2):110-113.
- 1987 Threshold of Affordability: Assessing Fish Remains for Socioeconomics. In *Consumer Choice in Historical Archaeology*, edited by Suzanne M. Spencer-Wood, pp. 85-99. Plenum Press, New York.

Skinner, John E.

- 1962 *An Historical Review of the Fish and Wildlife Resources of the San Francisco Bay Area*. California Department of Fish and Game Water Projects Branch Report 1.

Smith, Bruce D.

- 1983 Selectivity Determinations: A Continuum from Conservative to Confident. In *Animals and Archaeology: 1. Hunters and Their Prey*, edited by J. Clutton-Brock and C. Grigson, pp. 295-304. British Archaeological Reports International Series No. 163.

Smith, C. A.

- 1981 Archaeological Site Record for CA-SFR-104H (*William Grey at Levi's Plaza*). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.

Smith, Mary Hilderman

- 1981a *An Interpretive Study of the Collection Recovered from the Storeship Niantic (CA-SFR-81H)*. Ms. on file, National Trust for Historic Preservation and National Maritime Museum Association, San Francisco.
- 1981b *Interpretive Study of the Niantic Collection (CA-SFR-81H)*. Unpublished Master's thesis, San Francisco State University, San Francisco.

Smith, Nora Archibald

- 1925 *Kate Douglas Wiggin, As Her Sister Knew Her*. Houghton Mifflin Company, Riverside Press, Cambridge, Massachusetts.

Smith, Otis G.

- 1903 The Coal Fields of the Pacific Coast. In *Twenty-Second Annual Report of the United States Geological Survey ... 1901-1902. Part 3: Coal, Oil, Gas*. Washington, D.C.: Government Printing Office.

Soule, Frank, John H. Gihon, and James Nisbet

- 1855 *The Annals of San Francisco*. D. Appleton, New York.

South, Stanley

- 1977 *Method and Theory in Historical Archaeology*. Academic Press, New York.

- Spencer-Wood, Suzanne M.
1991 Toward an Historical Archaeology of Materialistic Domestic Reform. In *The Archaeology of Inequality*, edited by Randall H. McGuire and Robert Paynter, pp. 231-286. Basil Blackwell, Oxford.
- Spencer-Wood, Suzanne M. (Editor)
1987 *Consumer Choice in Historical Archaeology*. Plenum Press, New York.
- Stansell, Christine
1987 *City of Women: Sex and Class in New York, 1789-1860*. University of Illinois Press, Urbana, Illinois.
- Starbuck, David R.
1986 The New England Glassworks: New Hampshire's Boldest Experiment in Early Glassmaking. *The New Hampshire Archaeologist* 27(1):1-148 (Special Issue).
- Staski, Edward
1987 Border City, Border Culture: Assimilation and Change in Late 19th Century El Paso. In *Living in Cities: Current Research in Urban Archaeology*, edited by Edward Staski, pp. 48-55. The Society for Historical Archaeology Special Publication Series No. 5.
- Staski, Edward (Editor)
1987 *Living in Cities: Current Research in Urban Archaeology*. The Society for Historical Archaeology Special Publication Series No. 5.
- State of California State Lands Commission
v.d. Computer Data Base including list of shipwrecks and available individual data records at the California State Lands Commission. Ms. on file, State of California State Lands Commission, Sacramento.
- Sternad, Frank, and Jack Prichett
1981 Catalogue of Bottle Types Collected at N-5. In *Behind the Seawall: Historical Archaeology along the San Francisco Waterfront*, vol. 3, edited by Allen G. Pastron, Jack Prichett, and Marilyn Ziebarth, pp. 593-652. San Francisco Clean Water Program, San Francisco.
- Stewart, John, John Light, and Louis Lefleche
1979 *Identification of Work Areas in the Fort Joseph Smithy*. Parks Canada Research Bulletin Number 111, Ottawa.
- Stewart-Abernathy, Leslie C.
1986 Urban Farmsteads: Household Responsibilities in the City. *Historical Archaeology* 20(2):5-15.
- 1992 Industrial Goods in the Service of Tradition: Consumption and Cognition on an Ozark Farmstead before the Great War. In *The Art and Mystery of Historical Archaeology: Essays in Honor of James Deetz*, edited by Anne Yentsch and Mary C. Beaudry, pp. 101-106. CRC Press, Boca Raton, Florida.
- Stewart-Abernathy, Leslie C., and Barbara L. Ruff
1989 A Good Man in Israel: Zooarchaeology and Assimilation in Antebellum Washington, Washington, Arkansas. *Historical Archaeology* 23(2):96-112.
- Stillman, J. D. B.
1877 *Seeking the Golden Fleece*. A. L. Bancroft, San Francisco.
- Steiner, Mary C.
1991a Food Procurement and Transport by Human and Non-Human Predators. *Journal of Archaeological Science* 18:455-482.
- Steiner, Mary C. (Editor)
1991b *Human Predators and Prey Mobility*. Westview Press, Boulder, Colorado.
- Stirton, R.A.
1951 Prehistoric Land Animals of the San Francisco Bay Region. Geologic Guidebook of the San Francisco Bay Counties. *California Division of Mines Bulletin* 154:177-186. San Francisco.
- Stoddard, Charles Warren
1903-1906 Stoddard Papers. Ms. on file, Bancroft Library, University of California, Berkeley.
- Stow, J. W.
1871 Reply to the San Francisco Gas Company's Circular about Petroleum Gas, San Francisco.
- Stromberg, Richard L.
1990 Archaeology on Contaminated Sites. Paper presented at the Society for Historical Archaeology Annual Meetings, Tucson, Arizona.
- Styles, Bonnie W.
1981 Faunal Exploitation and Resource Selection: Early Late Woodland Subsistence in the Lower Illinois Valley. *Northwestern University Archaeological Program Scientific Papers* 3:1-312.

- Szuter, Christine R., and Frank E. Bayham
1989 Sedentism and Prehistoric Animal Procurement Among Desert Horticulturalists of the North American Southwest. In *Farmers As Hunters: The Implications of Sedentism*, edited by S. Kent, pp. 80-95. Cambridge University Press, Cambridge, England.
- Taber Consultants, Engineers and Geologists
1991 Foundation Investigation, Terminal Separation Replacement, Bridge #34-54, 04-SF-480 0.0/0.7. Prepared June and December 1991 for CALTRANS Transportation Laboratory, Sacramento.
- Taylor, Bayard.
1850 *Eldorado, or Adventures in the Path of Empire*. New York, n.p.
- Teague, George Allen
1987 *The Archeology of Industry in North America*. Ph.D. dissertation, Department of Anthropology, University of Arizona. University Microfilms, Ann Arbor.
- Tencer, Belinda
1979 National Register of Historic Places Registration Form for the Audiffred Building (CA-SFR-88H). Ms. on file, E-65/S-3223, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- Thomas, David H.
1986 Contemporary Hunter-Gatherer Archaeology in America. In *American Archaeology, Past and Future*, edited by D. J. Meltzer, D. D. Fowler, and J. A. Sabloff, pp. 237-276. Smithsonian Institution, Washington, D.C.
1989 *Archaeology*. 2d ed. Holt, Rinehart, and Winston, Fort Worth, Texas.
- Thomson, R. H.
1950 *That Man Thomson*, edited by F. H. Redord. University of Washington Press, Seattle, Washington.
- Todd, Lawrence C., and David J. Rapson
1988 Long Bone Fragmentation and Interpretation of Faunal Assemblages: Approaches to Comparative Analysis. *Journal of Archaeological Science* 15:307-325.
- Topham, Edward M. D.
1950 *St. Mary's Hospital and the Sisters of Mercy, 1903-1949*. Privately Printed, San Francisco.
- Tordoff, Judith D., with Dana McGowan Seldner
1987 *Dutch Gulch Lake Excavation at Thirteen Historic Sites in the Cottonwood Mining District*. Contract No. DACWO5-81-C-0094. Cottonwood Creek Project, Shasta and Tehama Counties, California. Submitted to U.S. Army Corp of Engineers, Sacramento District. Submitted by the Hornet Foundation of California State University, Sacramento and Theodoratus Cultural Research, Fair Oaks, California.
- TRC Environmental Corporation
1992 Report of Soil and Groundwater Investigation. Route 480 Terminal Separation, Postmiles 0.0/0.7, San Francisco, California. Prepared for California Department of Transportation.
1993 Site Safety Plan for Activities at the Caltrans Route 480 Terminal Project. Prepared for California Department of Transportation.
- Trinder, Barrie
1991 Letter to Adrian Praetzellis, 6 December 1991.
- Tschudy, R. H.
1969 Relationship of Palynomorphs to Sedimentation. In *Aspects of Palynology*, edited by R. H. Tschudy and R. S. Schott, pp. 79-96. John Wiley and Sons, New York.
- Turner, Alan
1983 The Quantification of Relative Abundances in Fossil and Subfossil Bone Assemblages. *Annals of the Transvaal Museum* 33(20):311-321.
1989 Sample Selection, Schlepp Effects and Scavenging: The Implications of Partial Recovery for Interpretations of the Terrestrial Mammal Assemblage from Klasies River Mouth. *Journal of Archaeological Science* 16:1-11.
- Turner, A., and N. R. J. Fieller
1985 Considerations of Minimum Numbers: A Response to Horton. *Journal of Archaeological Science* 12:477-483.
- Unglik, Henry
1984 Iron Working at an Early 19th-Century Blacksmith Shop: An Examination of Slag and Iron. Appendix in *A Frontier Fur Trade Blacksmith Shop, 1796-1812*, by John Light and Henry Unglik. Parks Canada, Ottawa.
1990 *Cast Irons from Les Forges du Sain-Maurice, Quebec: A Metallurgical Study*. Environment Canada Parks Service, Ottawa.
- U.S. Census Bureau
1860 U.S. Federal Census Population Schedule for the Year 1860. San Francisco. (Microfilm).
1870 U.S. Federal Census Population Schedule for the Year 1870. San Francisco. (Microfilm).

- 1880 U.S. Federal Census Population Schedule for the Year 1880. San Francisco. (Microfilm).
- 1900 U.S. Federal Census Population Schedule for the Year 1900. San Francisco. (Microfilm).
- 1910 U.S. Federal Census Population Schedule for the Year 1910. San Francisco. (Microfilm).
- United States Department of the Interior, National Park Service
n.d. *Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places*. National Register Bulletin No. 20. U.S. Government Printing Office, Washington, D.C.
- 1977 *Guidelines for Local Surveys: A Basis for Preservation Planning*. National Register Bulletin No. 24. Rev'd 1984. U.S. Government Printing Office, Washington, D.C.
- 1983 Archaeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines. 48 F.R. 44716-44742.
- 1991 *How to Apply the National Register Criteria for Evaluation*. National Register Bulletin No. 15. Government Printing Office, Washington, D.C.
- University of California, Lowie Museum of Anthropology
v.d. Archaeological Site Concordances: Lowie Museum of Anthropology Collections, University of California, Berkeley. Ms. on file, Basin Research Associates, San Leandro. (Copied February 1984).
- Upham, Samuel
1878 *Scenes in El Dorado*. Samuel Upham, Pittsburg.
- Upton, Dell
1992 *The Self in Space: The City as Material Culture*. In *The Art and Mystery of Historical Archaeology: Essays in Honor of James Deetz*, edited by Anne Yentsch and Mary C. Beaudry, pp. 51-74. CRC Press, Boca Raton, Florida.
- Upton, Dell, and John Michael Vlach (Editors)
1986 *Common Places. Readings in American Vernacular Architecture*. The University of Georgia Press, Athens, Georgia.
- Van Orman, Richard A.
1969 *Hotel City of the West*. In *Reflections of Western Historians*, edited by John A. Carroll, pp. 10-18. Tucson, Arizona.
- Walker, Goodyear K.
1991 Letter to Mr. Randall Deane, Office of Environmental Review, Department of City Planning, San Francisco. Dated 10 July 1991. From State of California State Lands Commission, Sacramento. Regarding list of shipwrecks and available individual data records at the State of California State Lands Commission.
- Wall, Diana diZerga
1987 *At Home in New York: Changing Family Life among the Propertied in the Late Eighteenth and Early Nineteenth Centuries*. Unpublished Ph.D. dissertation, Department of Anthropology, New York.
- 1991 *Sacred Dinners and Secular Teas: Construction of Domesticity in 19th Century New York*. *Historical Archaeology* 25(4):69-81.
- Wallace, W. J., and D. W. Lathrap
1975 *West Berkeley (CA-Ala-307): A Culturally Stratified Shellmound on the East Shore of San Francisco Bay*. University of California Contributions of the Archaeological Research Facility Number 29. Department of Anthropology, University of California, Berkeley.
- Walsh, James P.
1978 *The San Francisco Irish 1850-1976*. The Irish Literary and Historical Society, San Francisco.
- Walsh, Michael R.
1986a Archaeological Site Record for CA-SFR-112 (Stevenson Street Shellmound). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986b Archaeological Site Record for CA-SFR-113 (Market Street Shell Midden). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1986c Archaeological Site Record for CA-SFR-114 (Moscone or the Yerba Buena Shellmound). Ms. on file, California Archaeological Site Inventory, Northwest Information Center, Rohnert Park, California.
- 1987 Two Newly Discovered Prehistoric Shellmounds in Downtown San Francisco: Sampling an Indefinite Universe (CA-SFR-112 and -113?). Paper presented at the Annual Meeting of the Society for California Archaeology, Fresno, California.
- 1990 *Field Methods for the Hoff Store Site*. In *The Hoff Store Site and Gold Rush Merchandise from San Francisco, California*, edited by Allen G. Pastron and Eugene M. Hattori, pp. 19-24. Society for Historical Archaeology Special Publication No. 7.
- Watson, Aldren
1990 *The Blacksmith, Ironworker, and Farrier*. New York: W. W. Norton.
- Wheelan, Albert P.
1928 *Levelling of South of Market's Sand Hills: "Steam Paddy" Hewes*. *South of Market Journal* 3(4):4-5. San Francisco.

- Whitney-Desautels, Nancy A.
1983 The Encino Roadhouse Complex. *Pacific Coast Archaeological Society Quarterly* 19(1):39-46.
- Wiggin, Kate Douglas
1923 *My Garden of Memory*. Houghton Mifflin Company
Riverside Press, Cambridge, Massachusetts.
- Wiggin, Kate Douglas, and Nora Archibald Smith
1897a *Froebel's Occupations*. Houghton, Mifflin Company
Riverside Press, Cambridge, Massachusetts.
1897b *Froebel's Gifts*. Houghton, Mifflin Company
Riverside Press, Cambridge, Massachusetts.
- Wilbur, Geo. B.
1890 *Langley's San Francisco Directory for the Year
Commencing May, 1890*. Geo. B. Wilbur, receiver of
Painter & Co., San Francisco.
1891 *Langley's San Francisco Directory for the Year
Commencing May, 1891*. Geo. B. Wilbur, receiver of
Painter & Co., San Francisco.
1892 *Langley's San Francisco Directory for the Year
Commencing May, 1892*. Geo. B. Wilbur, receiver of
Painter & Co., San Francisco.
- Winer, Margot, Patricia Scott, and James Deetz
1991 Buried Treasure: Household Archaeology in the Eastern
Cape. *The Phoenix, Magazine of the Albany Museum*
4(2):5-13.
- Wing, Elizabeth S., and Antoinette B. Brown
1979 *Paleonutrition: Method and Theory in Prehistoric
Foodways*. Academic Press, New York.
- Wirth Associates, Inc.
1979a *Potrero 7: Phase I Cultural Resources Overview and
Inventory*. Prepared for Pacific Gas and Electric Company.
Ms. on file, S-3244, California Archaeological Inventory,
Northwest Information Center, Rohnert Park, California.
1979b *Potrero 7: Phase II Archaeological Test Excavations*.
Prepared for Pacific Gas and Electric Company. Ms. on
file, California Archaeological Inventory, Northwest
Information Center, Rohnert Park, California.
- Wright, J. V.
1987 Archaeological Evidence for the Use of Furbearers in North
America. In *Wild Furbearer Management and
Conservation in North America*, edited by M. Novak, J. A.
Baker, M. E. Obbard, and B. Malloch, pp. 3-12. Canadian
Ministry of Natural Resources, Ottawa, Ontario, Canada.
- Yellen, John E.
1991a Small Mammals: !Kung San Utilization and the Production
of Faunal Assemblages. *Journal of Anthropological
Archaeology* 10:1-26.
1991b Small Mammals: Post-Discard Patterning of !Kung San
Faunal Remains. *Journal of Anthropological Archaeology*
10:152-192.
- Yentsch, Anne
1981 *Phase II Archaeological Survey of the Reconstruction of
Route 104, North Smithfield, Rhode Island*. Institute for
Conservation Archaeology, Peabody Museum, Harvard.
1991a Chesapeake Artefacts and their Cultural Context: Pottery
and the Food Domain. *Post-Medieval Archaeology* 25:25-
72.
1991b The Symbolic Division of Pottery: Sex-related Attributes of
English and Anglo-American Household Pots. In *The
Archaeology of Inequality*, edited by Randall McGuire and
Robert Paynter, pp. 192-230. Basil Blackwell, Oxford,
England.
1992 Gudgeons, Mullets, and Proud Pigs: Historicity, Black
Fishermen, and Southern Myth. In *The Art and Mystery of
Historical Archaeology: Essays in Honor of James Deetz*.
edited by Anne Yentsch and Mary C. Beaudry, pp. 283-
309. CRC Press, Boca Raton, Florida.
n.d. *Yesterday's Rulers, Yesterday's People: An Archaeology
and History of Black and White Annapolis, 1720-1780*.
Cambridge University Press, Cambridge, England, in press.
- Yentsch, Anne, and Judson Kratzer
n.d. Potting Round Pleasure Gardens: Techniques for
Excavating and Analyzing Buried 18th-Century
Landscapes. Draft ms. in possession of authors.
- Young, John P.
1912 *San Francisco. A History of the Pacific Coast Metropolis*.
S. J. Clark, San Francisco.
- Ziegler, Alan C.
1973 Inference from Prehistoric Faunal Remains. *Addison-
Wesley Module in Anthropology* 43:1-57.
- Zierden, Martha A., and Jeanne A. Calhoun
1986 Urban Adaptation in Charleston, South Carolina, 1730-
1820. *Historical Archaeology* 20(1):29-43.

Ziesing, Grace H.

- 1989 Analysis of Personal Effects from Excavations of the Boott Mills Boardinghouse Backlots in Lowell. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*. Vol. III, *The Lowell Boarding House System as a Way of Life*, edited by Mary C. Beaudry and Stephen A. Mrozowski, pp. 209-230. Cultural Resource Management Study No. 21. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

Zitzler, Paula

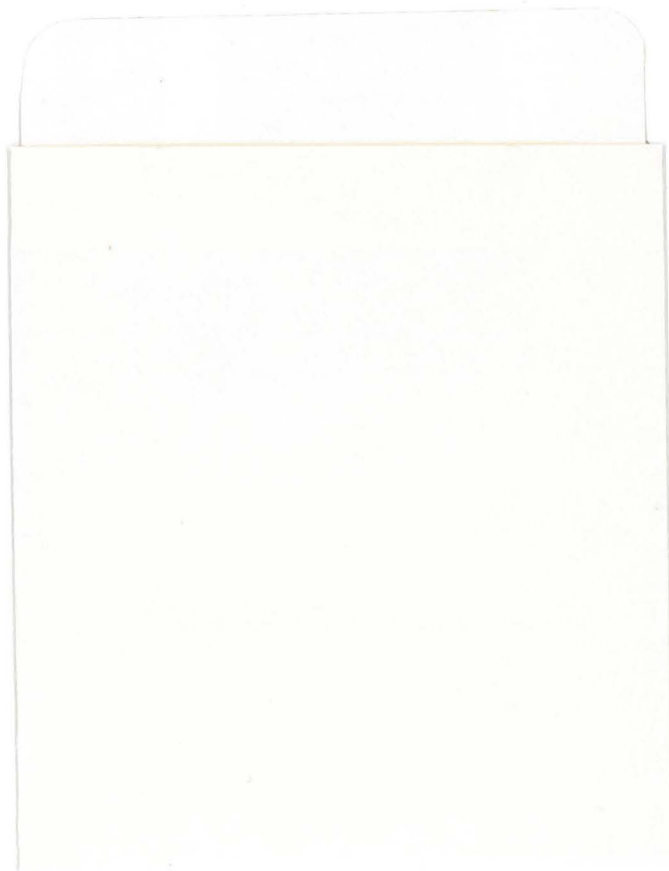
- 1987 *An Archaeological Planning Overview of the Cambria Iron Company, Lower Works, Johnstown, Pennsylvania*. Prepared for U.S. Department of the Interior, National Park Service, Rockville, Maryland.

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"This school, I thought, must not be an exotic, a parasite, an alien growth, a flower of beauty transplanted and shown under glass; it must have its roots deep in the neighborhood life, and there my roots must be also."

Kate Douglas Wiggin,
Founder of the Silver Street Kindergarten,
San Francisco, 1878.